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THE

EAST INDIA

VADE-MECUM;

OR,

Complete Guide

TO

GENTLEMEN INTENDED FOR THE

CIVIL, MILITARY, OR NAVAL SERVICE

OF THE

HON. EAST INDIA COMPANY.

BY

CAPTAIN THOMAS WILLIAMSON,

Author of 'The Wild Sports of the East.'

IN TWO VOLUMES.

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VADE-MECUM.

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THE

EAST INDIA

VADE-MECUM.

FOR some months, generally during the latter part of the rains, the weather is so close and sultry, that universal exudation takes place, even while sitting quiet. The natives, as I remarked in the outset of this subject, have, from experience, adopted a very different mode from that we should have expected to find in use, under such a latitude. We should, no doubt, have been prepared to see airy habitations, through which the wind could pass freely in every direction. But it is far otherwise; and Europeans have, at length, become convinced, that the most insupportable heats are derived from the glare of light objects; or, in other words, from the reflection of surfaces intensely acted upon by a vertical sun.

Some conception may be formed of that intensity, from the fact of meat having been broiled

on the cannon mounted upon the ramparts of Fort-William! We, therefore, must coincide with the habits of the natives, to a certain extent, if we mean to retain health, or to acquire comfort. Such, indeed, should, in every country, be held in view: for, however absurd many practices may at first appear, it will ordinarily result that necessity was their parent. I do not mean to say that we should imitate, much less adopt, without discrimination, all we see; but it may be considered an axiom, that, by taking the general outline of indigenous customs for our guide, if we err, it will be on the safe side. Nothing can be more preposterous than the significant sneers of gentlemen on their first arrival in India; meaning, thereby, to ridicule, or to despise, what they consider effeminacy, or luxury. Thus, several may be seen annually walking about without *chattahs*, (*i. e.* umbrellas,) during the greatest heats; they affect to be ashamed of requiring aid, and endeavor to uphold, by such a display of indifference, the great reliance placed on strength of constitution. This unhappy infatuation rarely exceeds a few days; at the end of that time, sometimes only of a week, (nay, I have known the period to be much shorter,) we too often are called upon to attend the funeral of the self-deluded victim! The first attack is generally announced by cold shiverings, and bilious

vomiting; delirium speedily ensues, when putrefaction advances with such hasty strides, as often to render interment necessary so soon as can possibly be effected.

The glare is certainly far more distressing than exposure to the sun at some seasons: but nothing can equal the effects of both glare and sun-shine, acting upon the human frame, during a Midsummer's day; when, perhaps, not a breath of air is moving, when every leaf seems to repose, and every bird, saving the vulture, the adjutant, (or argeelah,) and the kite, retires to some shady spot, to avoid the solar ray. At such times, the peaceful Hindu confines himself to an apartment, from which light is generally excluded: there he sits among his family, enjoying his pipe, refreshing himself occasionally by bathing, drinking the pure beverage afforded by some adjacent spring or well; and, in general, avoiding to eat, except of ripe fruits, especially the *turbooz*, or water-melon, until the cool of the evening. In the meanwhile, however, he perspires copiously, even though in a state of inactivity, unless when refreshed by a *punkah*, or fan, moved either by his own hand, or by that of some menial.

The instinct of the birds above named, to wit, the argeelah, the vulture, and the kite, all of which are extremely numerous throughout India, and contribute greatly to the salubrity of

the air, by carrying off astonishing quantities of putrefactive offal, &c., is wonderful! About mid-day, when the sun's beams strike with incredible force upon the earth's surface, these feathered scavengers ascend, perhaps to the height of seven or eight hundred yards, so that the largest of them, (the argeelah) is scarcely discernible: there they soar beyond the reach of reflection from the heated soil, enjoying the freshness of a cooler atmosphere, and descending only when allured by the scent of prey. Their sense of smelling must, indeed, be acute; for we see them, especially the vultures, flying for miles, and from all quarters, towards some carcase, usually that of a Hindu, floating down the stream, or stranded upon some shelving bank; but so situated as to render it perfectly certain that the visual faculties could have no concern in the discovery.

Few of the natives have *tatties* applied to their doors, or windows; though by no means insensible to the gratification they afford; but penury, or, to say the least, close and parsimonious economy, prompt to the denial of such a comfort: a comfort without which any constitution, not inured to the climate, would speedily give way. It is really curious to observe what may be effected by habit! When we understand how fatally the sun's rays act upon our European frames, even while under

the shade of a thick painted umbrella, and although our diet may be nearly similar to that of the most abstemious Hindu, it certainly must appear wonderful, that children, of whatever age, whose rapid circulation, and sable color, should, according to the estimates we form of temperament, be highly unfavorable to such exposure, run about at all seasons, bare-headed, and perfectly nude; seeming to set the sun, the wind, and the rain, alike at defiance. We see the same individuals making long journies, in the most torrid seasons, under nearly similar circumstances; nay, they even carry *bangies*, containing, on an average, full a *maund*, (82lb. avoirdupoise,) sixteen, eighteen, twenty miles, or even more, under such an oppressive heat as would kill an European outright; and this, too, for a few pence. If, in considering this point, we urge the benefits of extreme temperance, we urge that which often does not exist; since many, who practise the above, may be ranked among the most arduous votaries of Bacchus, devouring fish, flesh, and fowl, highly spiced, whenever their purses, or the bounty of others, may afford them so welcome a regale. When we see the several shop-keepers, in every city and town, serving their customers, or, in their absence, smoking like Vesuvius, in their little *boutiques*, exposed to the glare, and to the burning winds; when we see these persons,

with parched skins, and their eyes violently irritated, and clogged, by the clouds of dust which range along the streets, and which, occasionally taking a whirl, nearly suffocate all within their reach; we may then fairly admire the force of habit, and congratulate ourselves on the blessings of a more temperate climate!

In the same situations, we see two classes of persons, both natives of the soil, acting in diametric opposition to each other; and exhibiting that powerful resistance capable of being made by long residence, or rather by aboriginal habitude, against that which never fails to consign our countrymen to the grave. The former class confine themselves, as much as their avocations may permit, within gloomy, but cool, chambers; living most abstemiously, yet, at certain times, exposing themselves in the most unequivocal manner to the severest heats: the other, perfectly inattentive to the dictates of prudence, yet performing what we may fairly term wonders, in opposition to their destructive locality. When the English first visited India, they adopted a mode of building by no means consistent with common sense, and displaying a total ignorance of the most simple of nature's laws. We accordingly find, that all the old buildings, such as may lay claim to a duration of from forty to sixty years, were, like the celebrated Black-Hole, constructed more like

ovens, than like the s of enlightened beings. The doors small, the windows still less, in p while the roofs were carried up many ve both. Those roofs were in themse ulated to retain heat to an extreme, be lt of solid tarras, at least a foot thick, lying horizontally upon immense timbers, chiefly of teak, or of saul wood. Again, when they built *bungalows*, (*i. e.* thatched houses,) of one (ground) floor only, the utmost care was taken to close up all the intervals between the thatch, and the walls, on which it rested; so as to exclude the external air, as well as the dust: a practice religiously observed even to the present date. The obvious consequence of this latter construction is, that, whatever air is retained between the thatch, (which, in the course of the day, becomes very, very warm,) and the upper lines of the windows must be highly rarefied.

Thus, we invariably observe, that, towards sun-set, when the inhabitants quit the inner hall, &c., either to sit out on *chabootahs*, (*i. e.* large terraces,) raised perhaps a foot or two from the level of the area, and abundantly watered for the occasion; or when they remove to the windward *veranda* (or balcony); on either of these occasions, the interior becomes intolerably hot, on account of the rarefied air being drawn down by that current inevitably

attendant upon t d of all the *tatties*; and, by the thro of all the doors and windows.

In a preceding ave shewn, that the French generally on more philosophical principles; they m eir doors and windows remarkably high; but, there yet remains a very important improvement to be made; namely, the introduction of tin ventilators, to be inserted near the summits of the thatche . It is a fact, that, during many months in the year, the houses built by most Europeans, and especially their *bungalows*, are so extremely heated, as to render it absolutely impossible to sleep in their interior, without the intervention of some artificial means for keeping the air around the bed at a proper temperature.

However faulty the first European builders in India might have been, the moderns have by no means made such improvements as we should suppose experience would have led them to adopt. Whether from economy, or from more attention to exterior, than to comfort, scarce a house is now built with such spacious, lofty, and substantial *verandas*, as are to be seen on the south side of almost every old mansion. Some of these antiquated edifices had *verandas* on several sides, and a few might be quoted having them all around; as seen in the officers' quarters at Berhampore, and Dinapore. It can

scarcely be doubted, that such *verandas* are, in every respect, admirably suited to the climate; since they prevent the sun from striking on the main wall; which, in exposed situations, have been known to give from 8° to 10° difference on the thermometer; under circumstances in every other respect similar.

It is peculiar, that, until within the last twenty-five years, the ground floors, that is, the whole of the basements, of those fine large houses to be seen in all quarters of Calcutta, and in various parts of the interior, were consigned to the reception of palanquins, gigs, water-stores, or to be *wine-godowns*, (or cellars,) *butler-connahs*, (or pantries,) and even, in some instances, stables! In those days, the whole of the family resided in, and confined themselves to, the first floor; which was then the summit of the habitation: leaving to their luggage, cattle, and menials, that part which has lately been discovered to be, in every respect, most suitable to the accommodation of the European population. In houses of agency, &c., we now see the basement converted partly into offices, and but rarely any portion of it appropriated as above described; while, the generality of new houses are built upon a scale such as favors this salutary change, by giving sufficient height to the lower apartments; thereby adapting them to every purpose, and occasioning a

considerable reduction of the ground plan, in consequence of the accommodations thus gained.

The practice of building houses without *verandas*, certainly cannot be approved; whereas, the old mode of building them on pillars, was highly ornamental, and, at some seasons, not less appropriate: but, the great art of keeping a house cool during the prevalence of the hot-winds, rests entirely on shutting them out, except at some few apertures supplied with *tatties*; which, being kept constantly moist, or, indeed, dripping wet, produce such an immense evaporation, as to cool the interior completely: of course, a suitable draught must be preserved, by opening some window, &c. on the lee-side. This is commonly effected by means of Venetians; which allow the air to pass, but debar the access of glare. Without adverting to the expence, it should seem that a *close-veranda* is by far preferable to an open one; and, were it not for the immense additional charges, we can hardly doubt that the European inhabitants of Calcutta would, in imitation of the generality of *bungalow*-residents, have their apartments surrounded by a *veranda*, of full fourteen feet in width; with apertures, of a good size, in the exterior wall, corresponding with those of the interior. This arrangement renders the generality of *bungalows*

remarkably pleasant; but, it must be noticed, that there is a very wide difference in the expence incurred in rendering them so: their roofs being of thatch, and their walls of sun-burnt bricks, plastered with mud and chaff, offer a great contrast in the out-lay, both as relating to the labor, and to the materials, in a house constructed of burnt bricks, and good lime, whose roof is of masonry, and in which timbers of great price are every where used. Accordingly, we find, that, in almost every part of India, an excellent *bungalow* may be built for about five thousand rupees, completely fitted with glass doors, and windows, and with all the necessary out-offices duly tiled, or thatched, according to their purposes; while, a house suited to the accommodation of the same family, in Calcutta, could not be finished for less than ten times that sum.

The bricks form a very, very small portion of the disbursements incident to building in India: so cheap, indeed, are they, that most of the made-roads about Calcutta, and in other parts, are formed by laying broken, or even whole, bricks regularl ; giving the centre two or three layers, gradually tapered off to the sides, and then covering them with a coat of rubbish, or, which is far better, coarse sand. Such roads are extremely firm, and far more durable, than

those we make with gravel, flint, lime-stone, &c. But great allowance must be made for the heavy machines used among us, and carrying such tremendous burthens; whereas, an Indian *hackery* can rarely weigh five cwt., nor can its load be averaged at more than fifteen cwt., being altogether only a ton. We well know, that our common narrow-wheeled waggons weigh from fifteen to twenty-five cwt.; and, that, except where weigh-bridges limit their burthens, it is by no means uncommon to see them carrying from two and a half, up to four, tons. Three chaldron of coals will be found to average about seventy cwt.; yet, are often drawn by three horses through the streets of London.

The lime used in Calcutta, is brought down from the *Morungs*, and their vicinity, in large boats, being previously slaked: though it is sometimes imported in its quick state, or as nearly so as accident may permit. It may readily be concluded, that, after a passage of from three to four hundred miles, this article is rather deteriorated; especially as the voyage can rarely be effected under three weeks or a month. The prices of this kind of lime, made from a very firm stone, called *gutty*, abundant in some parts, vary much according to the season, and to the demand: it has been sold as

low as six or seven rupees per hundred maunds, but, at other times, has reached to twenty and twenty-five.

At Madras, and indeed all along the coast of Coromandel, as well as on some parts of the Malabar border, an excellent kind of lime is made from sea shells. This nearly equals what is made in Italy, from the refuse of marble, and receives an extraordinary fine surface, competiting even with that of polished glass; at the same time that it is incomparably firm, and durable. When laid upon a wall, which is done only by way of a finish, it is carefully freed from grit, and kept working, and rubbing, until nearly dry; thereby to prevent the surface from cracking, as it would be subject to do, when acted upon by the hot air at mid-day: when nearly dry, it is rubbed with coarse calico cloths, until it receives a beautiful lustre, which causes it to appear semi-diaphanous. A few houses at Calcutta have been finished with this kind of lime, conveyed from Madras by shipping; but the expence, being very considerable, has occasioned the common *Morung* lime to be generally employed, both for cement, and for white-washing.

In the ordinary buildings constructed in the upper parts of the country, a weaker kind of lime is obtained by burning a substance called *kunkur*, which, at first, might be mistaken for small rugged flints, slightly coated with soil.

The experiments made upon these alkaline concretions, which abound in most parts above Bengal Proper, and, in some places, prove extremely troublesome to the farmer, but especially to the horticulturist, give the following result: calcareous earth, 41, cilicious earth, 16, calx of iron, 3, and air, 40. *Kunkur* is not easily reduced to a calx, it requiring a greater heat than is necessary to burn the harder kinds of *gutty* it is, likewise, less durable and tenacious as a cement; of which the color, viz. commonly what we call fawn, is a strong indication.

Whether from want of sufficient power in their kilns, or that the *kunkur* is so peculiarly hard, we commonly find that, on slaking, a large portion of the interior of each lump remains unsubdued. These insoluble masses are often pounded by means of a *dainky*, or foot-break, and mixed with the perfect calx: nor is the lime burner very scrupulous in regard to keeping out the wood ashes, &c., remaining at the bottom of the kiln, after the *kunkur* has been taken out; on the contrary, he will, if not very narrowly watched, mix as much as he can with the calx; thereby causing the lime to be very considerably deteriorated. This kind of lime, commonly called *cutcha*, (*i. e.* weak,) sells for about six or seven rupees per hundred maunds.

In all parts of India, the lime-burners proceed on the most expensive plan; their kilns being

rarely more than four feet in diameter, nor above that much in height: consequently, they have not sufficient accumulation, concentration, or reverberation of heat, to burn the stones properly; neither do they, in general, break them sufficiently small, but bundle them in, with very little attention to regularity or economy. It is the same with the brick and tile-kilns; which are, for the most part, of a pyramidal form; the raw bricks being laid intermediately with the fuel, and the exterior being plastered over, perhaps half a foot in thickness, with mud. The best bricks I ever saw in India were made by an engineer officer, who had some extensive public works to carry on. He first built the whole of the walls of a *bungalow* he required, with sun-burnt bricks, properly cemented with mud well filled in; taking care to arch over the door and window openings in such way, that the frames could be afterwards introduced. The whole interior was then laid with bricks and fuel, while the exterior of the veranda walls were also closed in with sufficient to heat them thoroughly; and a complete coating was given, in the ordinary way. The bricks baked uncommonly well, while the walls became a solid mass, capable of resisting all the elements, should they unite for its destruction. The *bungalow* proved remarkably dry, and the plaster was found to adhere in a surprizing manner, while rats, snakes, &c.,

were all set at defiance; it being impossible for them to burrow in so hard a substance: the greater part of the cement, which happened to contain cilicious particles, was nearly vitrified.

Thirty years ago, the generality of houses were coated with the same kind of tarras as is employed for laying the floors, and the roofs: this was made of *chunam*, (*i. e.* white-lime,) one third; *soorky*, (*i. e.* brick-dust,) one third; and sand, one third; these, being mixed duly with a large portion of cut hemp, (wool being very scarce, and short hair not to be procured on any terms,) together with some *juggery*, or refuse molasses, made a tolerably strong cement. The surface, after a house had been duly plastered, was washed, while yet moist, with a strong solution of lime in water. This would have been enough to blind every man, woman, or child, in the place, had it not been partially remedied, by the admixture of some coloring matter with the finishing wash: but, whether red, yellow, or blue, which were the prevailing colors, it was found that the alkali generally destroyed their appearance, and left a motley kind of work.

The good taste of a few individuals, chiefly gentlemen in the corps of engineers, gradually overcame this vile imitation of Dutch and Portugueze finery, they substituting, in their public works, a plaster composed of river sand,

saturated with a solution of white lime, of the consistency of cream. The addition of the usual allowance of cut hemp, gave this simple compound, (if I may so blend the terms,) not only much additional durability, but a remarkably neat appearance; especially when the body of the building was of that fine grey, thus obtained, and the cornices, &c. were finished of a pure white. Houses thus exteriorly finished became yet further neat, by the contrast of their Venetian windows, invariably painted green: some prefer all verdigris; others, a deep clear green for the frame-work, with verdigris for the several leaves, or valves.

Almost every house has folding Venetians to each window, or outward door; these are sustained by very strong hinges, which allow each fold, or shutter, to open outwards, and to lie back flat upon the exterior wall: in that position the Venetians are kept from blowing about, by means of hooks; in the same manner as we see practised in England, where this kind of shutter is in use. Sash-windows are never made upon the European construction, but move invariably in two folds, one to the right, the other to the left; each opening inwardly, and lying within the thickness of the wall, or nearly so.

In no part of the world is more attention paid to the foundation of a house than in India; and

that not without necessity, the rains being so very heavy as to sap all weak buildings exposed to their action, either above, below, or laterally. When houses are built with what is termed *cutcha*, that is, with sun-dried bricks cemented with mud, and either plastered with the same, or with mortar, the least crack in the roof, or the smallest hollow near the foundation, will teem with danger. The rain which, often for a whole day, descends in streams, soon gets into the walls, where it does incalculable mischief: many of these houses, whose substance and general appearance should indicate a better fate, may annually be seen in ruins after a continued fall of heavy, or of drizzling, but oblique, rain: the latter is peculiarly unfavorable to such buildings as are insecurely coated; it drifts in under the plaster, damps the mud cement, and brings down the heavy roofs with a most sonorous crash. Few of these *cutcha* houses are now to be seen with tarras roofs; such as are so built for the sake of cheapness, being, almost without exception, intended for thatches, and thus becoming what we term *bungalows*. The natives build sometimes on that kind of half and half plan, which commonly, in the end, cheats the contriver. Thus, I have seen some, of a small description, built with *cutcha* (or sun-dried) bricks for the interior, while the exterior of the wall was made of *pucka* (or burnt) bricks;

from whose interstices the mortar was carefully picked out, as though about to be pointed; for the purpose of causing the exterior plastering to get into the joints, and thus to retain its position firmly. Admitting, and even admiring, the ingenuity of such a system, when properly conducted, I lament, that, in almost every case which came within my knowledge, the whole system was disgraced, by the house either falling *in toto*, or by shedding its coat of mail.

There certainly did formerly exist some mode of mixing the ingredients, or some particular recipe giving better proportions, or better materials, which, after a time, formed a very capital cement: of this, many very well known edifices furnish ample proof. The old fort, situate within the town of Calcutta, may be an apt quotation. The impressions made by shots, of 24 and 32lb. fired by Admiral Watson against its western face, when his fleet lay within three hundred yards of it, in the year 1755, were absolutely insignificant; the brave admiral might have battered for a century, without bringing down the wall. In the year 1779, when the Company's cloth *godown* took fire, the third regiment of European infantry, then in garrison at Fort-William, marched out with engines, &c. to aid towards its extinction; yet were they utterly unable to get the iron bars loose from the masonry; though provided with tackles, crows, axes, &c.

This *godown*, which occupied a large part of the northerly face of the old fort, was afterwards converted into offices; but with incredible labor! The masonry was as hard as rock! When this occurrence took place, the old fort had been built about forty years; whereas, we find that all the Company's, or any other, buildings which now claim that age, are of a very different complexion! The greater part of them, though not in a state of absolute ruin, are kept up at an inordinate expence; while such of them as have given up the ghost, display a crude mass of loose, friable, and mouldering rubbish.

Nor are the ancient terraces less obdurate than the old walls; many of these may be seen among the ruins of cities, and towns, of which we have scarcely any information, absolutely retaining their places, although the beams on which they formerly rested have been, God only knows how many years, removed. If these roofs had possessed any convexity, or been constructed according to the Syrian principle, we should have had less cause to admire their solidity, and toughness; but, such has never been the case with any I have seen; and which, though certainly of no considerable dimensions, appeared firm enough to sustain cannon of small calibre. I have often been one of a party to walk on such. It may, perhaps, be in place here to describe the manner in which roofs are

constructed in India: I mean such as are now under consideration. The beams are rarely more than two feet apart; and, speaking generally, may have a scantling of ten or eleven inches depth, by five, or six, in width; sometimes, though but rarely, and then only when under the eye of science, cambered to the extent of three or four inches; according to the length of the timber. These joists are laid upon the bare wall, having their ends previously well charred; and, in some cases, smeared with *petroleum*; called by the natives, 'earth-oil.' This is done to deter the white-ants from making an attack upon the wood; which, in time, they would certainly do, but for the above precaution. The ends of the timbers are cased in with masonry, so as to leave about four inches all the way round, and at their bases: in order that the timber may be removed, in case of decay, without damaging the wall; the interval is, however, filled up afterwards with *cutcha* work; which, not being liable to adhere firmly to the *pucka* wall, may be easily removed when the joist is to be changed. When plastered over; the whole appears uniform.

In some parts of the country, but especially in the upper provinces, the natives cover in their houses with flat roofs, made of clay, beat very firm, and about a foot in thickness. This mode of construction requires some care, but is

found to be extremely efficient. The walls ought to be substantial, as should also the joists; and the surface of the clay should be rather convex, so as to direct the water falling on it into proper gutters, or drains, and to prevent the building from being damped.

Without this precaution, the heavy falls of rain, which may be constantly expected during three months in the year, would speedily dissolve such tenements, with nearly as much facility as though they were made of lump-sugar. But when due care is taken, both to prevent, and to stop, leaks, clay roofs are rather eligible, than objectionable; especially in the vicinity of *bazars*, (or markets,) and lines, in which fires are frequent. Many gentlemen have adopted the plan, some wholly, others partially, in their *bungalows*, and find little or no cause to regret their having done so.

It is, however, expedient to send up a man now and then, to lute any cracks that may appear in consequence of excessive heats; but, after a season or two, the clay becomes extremely firm, nearly equal to mortar-tarras, resisting the various changes of temperature, and appearing to be consolidated into a very firm mass. The greatest inconvenience it produces, is the harbor afforded to that inconceivably obnoxious insect, the *white-ant*.

This little depredator rarely fails to take

advantage of whatever opportunity is offered for the exhibition of its powers. Assembling by the ten thousand, in a few hours they will eat out the bottom of a deal box, perhaps an inch in thickness, or render it a mere honey-comb. Of fir, they are remarkably fond, as also of mango-wood.

It seems rather peculiar that they should be so partial to woods abounding so highly, as these both do, in turpentine; while the presence of a few drops of *petroleum*, which is imported from Pegu, Ava, and the Arvean coast, under the name of *mutty ke tale*, (earth-oil,) seems to be a perfect preventive. Few things come amiss to these obnoxious visitants, which every where abound, and destroy wood, leather, cottons, woollens, &c. Nay, a story is current, that, some years back, they were absolutely accused of having devoured some thousands of dollars! Fortunately, *on deeper research*, it was discovered, that they had only ate away the bottom of the treasure-chest; and, like misers, had buried the hard cash some feet under ground.

As ceilings are not in use in India, each joist is neatly finished, having its lower edges rounded off with a beading-plane. At right angles with the joists, smaller battens, called *burgahs*, are laid; three or four inches wide, by about two or three deep, or *vice versâ*; these are nailed down upon the joists at such parallel distances,

in general about seven or eight inches, as may allow a large kind of tile to be laid on them. Over the tiles they lay rubbish, rather dry, about four or five inches deep, patting it down gently, by the continual operation of some dozens of men, women, and children, who, squatting, like monkies, on their haunches, and having batons of about a cubit in length, something of a trowel shape, though not so obtuse, continually beat the materials until they become perfectly compact. The better method, which is in more general adoption, is, instead of such rubbish, to put on a coarser kind of mortar, well worked up, but not very moist; which is beat in the mode above described. After this has been duly compacted, but before it is quite dry, another coating of two or three inches, but of finer materials, is put on, and beat in like manner; then a third, perhaps only an inch deep, of still finer materials; and, ultimately, the whole is coated, for about half an inch in depth, with the finest ingredients, mixed, after being sifted through a coarse cloth, with *jaggree*, and by some with peas-meal; which the natives consider to be peculiarly valuable in cement. This last coat is laid on with a trowel, very firmly pressed, in order to compact it the more, and to prevent cracking; which will, nevertheless, always take place, more or less, according as more or less pressure

and beating have been used; or, as the great body of the tarras may be made of good or bad materials.

All the partition-walls, dividing off the several apartments, are necessarily of masonry; both because the pressure from above is enormous; and, that wood cannot be trusted, where the white-ants could honeycomb its interior, without being much, if at all, noticed on its surface. These partition-walls are carried up about six inches above the tarras roof; whereby the latter appears to be divided into chequers, corresponding with the several apartments. Small channels are cut, to allow the water to pass into the spouts, or drains; from which jars, of about a hogshead in measurement, are filled with water intended for table use. Some spouts are made to extend full a yard from the wall, and, in some instances, have canvas hoses attached, for the purpose of leading the water into the jars; but the more modern practice is to build pipes of pottery within the wall, or to clamp them to it with iron, until their lower ends, which are crooked for the purpose, form a proper debouchure. The latter mode, however, in very heavy rains, subjects the walls to be damped, in consequence of the fall of water being greater than the pipes can instantly carry off. This may give some idea of those deluges which at times take place, almost instantaneously.

The tops of houses are invariably enclosed with breast-parapets, or with balustrades; which give a very finished appearance to these superb buildings. With the exception of those ridges formed by the continuation of the partition-walls, the roofs afford a pleasant promenade at certain seasons: some of them command most interesting views. During the very hot weather, probably from the end of April to the setting in of the rains in the first or second week of June, many gentlemen have their cots, (as the bed, with all its apparatus, is usually called,) carried to the tops of their houses, and sleep there during the night. This may appear a very hazardous proceeding; but, when it is considered, that no dew, worthy of notice, falls at that season, and, that the cots have generally curtains, which would receive, and absorb, what little might fall, we may, on the whole, pronounce it to be less dangerous than should at first be supposed. If, indeed, this were to be done more to the southward, near the mouth of the Hoogly river, where the immense marshes, the ouze left by the returning tides, and the jungles, which every where abound, produce the most deleterious exhalations, we should then be correct in exclaiming against the practice: but few, very few, instances could be adduced of any serious indisposition having attended it; while, on the other hand,

it is confessed by all who have adopted it, that the greatest refreshment ever resulted; enabling them to rise early, divested of that most distressing lassitude attendant upon sleeping in an apartment absolutely communicating a febrile sensation, and peculiarly oppressive to the lungs.

I believe all those fatal, or injurious effects, which have been so often adduced, by way of caution to persons impatient of heat, have been produced not by sleeping in an open exposure, but in a current of air. This I cannot recommend; on the contrary, I must vehemently censure such a custom, as being highly dangerous: I could quote several most melancholy cases, arising entirely from this most injudicious conduct! Mr. Johnson, who appears to have been about two years in India, during which time he was surgeon of a frigate, has published a volume, in which there are occasionally to be found interesting details, and sensible observations. I shall offer to my readers some remarks he has made, at page 269, that bear closely on the subject under discussion. He says: 'Europeans, in general, on their first arrival in India, are prepossessed with the idea, that sleeping at night in the open air must be a very dangerous practice; but, in the course of a short residence on shore, they get rid of this prejudice, by observing most of the natives, and many of the

Europeans, sleeping on open terraces, and in *verandas*, not only with impunity, but as a preservative against the debilitating effects of a hot climate. But on board-ships, where they have not an opportunity of seeing, or of reflecting on, these circumstances, they frequently adhere, for a considerable time after their arrival on the station, to the established regulations, of making every man sleep in his proper berth: and suffering none to lie about upon the decks; a system, in my opinion, very prejudicial to the health of ships' companies in India. At sea, indeed, it is not of so much consequence, where the watch on deck always gives sufficient room to those below; but it is in harbours, and road-steds, where the air is much hotter than at sea, the impolicy of the measure becomes manifest.'—And again, page 270, 'We will suppose, that every man, when he turns into his hammock, falls fast asleep in a few minutes; which, by the by, is not always the case. About eleven o'clock, however, I will venture to say, he wakes in a deluge of perspiration, panting with the heat and rarefied air; upon which he turns out, and goes upon deck, for the purpose, as he terms it, of getting a mouthful of fresh air; anathematizing, as he ascends, the infernal heat of the climate! Under pretence of going to the head, he gets upon the forecastle; when the cool breeze from the shore

immediately chills him, and gives a sudden check to his perspiration.' All this I have personally experienced, both on board-ship and on shore; and I make no scruple of saying, that, in lieu of being injured by sleeping out on a *chabootah*, in a well-covered cot, my whole frame has been braced, my rest has been sound and refreshing, and I have avoided all the miseries inseparably attendant upon seeking repose in a close, muggy atmosphere; where thirst and irritation create perpetual restlessness, banish sleep, and cause that relaxation and debility which render each subsequent day burthensome as its preceding night has been distressing!

In a former page, I observed, that boarded floors were almost unknown in India: various reasons have, doubtless, combined to explode them; firstly, the depredations of the white-ant; secondly, the perpetual danger of their warping; and, thirdly, the difficulty of rendering the sounds of foot-steps less audible. This last may appear trivial; but, where so many menials, &c., are ever moving about in various parts of a house, and that, too, with little ceremony, though, it is true, they are all bare-footed, it would prove extremely inconvenient at those times when the family might retire to rest during the heat of the day. About twenty-five or thirty years back, all the stairs were of masonry; but, of late years, wooden ones have been in-

troduced. These, being made to rest on strong beams, obvious in every part, save where they enter the walls, may be considered as tolerably safe from the white-ants; certainly they are much neater, and more easily kept in order. All the joists, in every house, are either painted, or tarred; the latter has a very unpleasant, indeed, a mean appearance; and is not often practised: for the most part, white, with a very slight cast of blue, to preserve it from fading, is adopted.

Some paint the beaded, or moulded, edges of the door pannels, also the rounded corners of the joists, with some delicate color; such as a very light sky-blue, a very light verdigris-green, or a lilac; and, by way of conformity, ornament the mouldings of the wall pannels with similar tints. In the upper provinces, it is a very prevalent fashion to color the pannels with some native ochres, of beautiful hues, leaving the mouldings, cornices, &c. white. These mouldings, &c. are all done by means of trowels shaped for the purpose, and not by moulds, or stamps; of course, what with want of device, and want of activity, such ornaments may be reckoned among that variety of tedious labors of which *Blacky* is extremely enamoured. Yet, in the execution of such matters, he will display great ingenuity, consummate patience, and, often, great delicacy: but, with respect to design, taste, composition, perspective, consistency,

and harmony; in all these, whether in drawing, sculpture, or in any mode of representation, he will prove himself to be completely *ignoramus*. Let the former apology be pleaded; namely, that, in every branch, the Indian mechanic is called upon, after, perhaps, only a few days of observation, or, at least, with so little practice as would, among us, be considered rather an objection than a qualification, to perform that which we judge to be unattainable, except by the application of several years, closely attached to one individual intention. Therefore, in lieu of condemning their operations, we should rather regard them with admiration; for, I will venture to assert, that we should not fail to wonder at one of our own countrymen, who, perhaps at rather an advanced age, without previous education, without the possibility of reference to books, or to public institutions, should undertake to do that with a hatchet, or any other gross implement, which persons regularly brought up in the respective profession should assert to be impracticable, unless duly provided with benches, vices, and tools, of exquisite formation, out of number. The Asiatic has the bare soil for his bench, his toes are his vice, and his implements usually amount to no more than a small adze, a saw, with, perhaps, a chisel, and a pair of uncouth pincers!

The same operations which I have described to be necessary for the construction of a tarras roof, are equally so for the floors in every part of the house; but, unless the basement stands very high, so as to allow of water houses, &c. underneath the ground-floor, it is usual to have the latter flued, by means of narrow channels, or air-conduits, of about four inches deep, and as many wide; so as to be covered with bricks of an ordinary size: these flues are made in parallel lines, at, perhaps, a foot or more asunder, and pass entirely under the house, in both directions, having their several apertures covered by small iron grates, for the purpose of keeping out rats, snakes, &c.; which would else find admirable asylums within these intersecting channels. The lower tarrases are thus kept thoroughly dry by the flues, which, of course, give ventilation to every part under the floor. Where bricks are scarce, which is often the case, on account of their never being made for general sale, except at public stations and great cities, and then of a very small size, it is common to build the ground tarras upon inverted pots; each being capable of containing about three pecks, or a bushel. These pots may be had, in any quantity, all over the country; generally at the low rate of a farthing, or, at the utmost, a halfpenny, each.

The pots are ranged upon the ground, within

the area formed by the walls, side by side, but not quite in contact, each resting on its mouth, which consists generally of a rim, projecting about three or four inches from the body of the vessel, which is nearly spherical. The loosest sand that can be had, or, in its absence, any dry rubbish, is then thrown in, so as to fill up all the intervals, and to cover the pots, about four inches in depth. This surface being levelled, another stratum of pots is added, if judged necessary; the whole process of filling up is similar in both, and the tarras is laid in the usual manner on the levelled surface.

By far the greater portion of the subsoil throughout Bengal, at least, in that wide expanse reaching from Gogra to Dacca, on the north-east, and from the Soane, along the plains at the foot of the hills, to the debouchure of the Hoogly, (which, together, form the limits of our richest, and most populous, *purgunnahs*, or districts,) is a loose, gritty sand, very like what farmers term a *lush*; which, in a few places, receives a strong red tint from the ferruginous mountains, every where to be seen along either boundary. This extreme looseness of the subsoil creates a most peremptory necessity for securing the foundations of weighty buildings, by every possible means; and, in the sinking of wells, is often found to present the most formidable obstacles.

Under such circumstances, it must appear self-evident, that those large mansions forming the bulk of Calcutta, by which I mean that portion raised, and inhabited, by Europeans; together with the several garden-houses, and the numerous edifices on a large scale erected by the natives, especially their places of worship, which are most ponderously constructed; all these necessarily require to be very firmly founded: nor can too much attention be paid to carrying off the water, which pours down from the tops of the houses; lest the bases should be sapped, and very serious injury be entailed.

With this intention, almost every *compound*, or enclosed area, is either laid with pan-tiles, or is well coated with *soorky*, in the same manner as the roads; while, in many instances, the junction of the wall with the level of the area is concealed, and secured, by a *talus*, blending with the building, at about a foot or more above that level.

With respect to *bungalows*, or any other buildings coming under the designation of 'temporary,' their foundations are usually very shallow. These are, for the most part, raised a foot or two from the surrounding level; and, as their inner walls, that often run from sixteen to twenty feet in height, are well secured by the *verandas*, which likewise preserve the precinct, for full twelve or fourteen feet, from being softened

by the rains, very shallow foundations are deemed sufficient. The surrounding parapet which limits, while it raises, the *veranda*, is usually of burnt-brick, cemented with good mortar, and plastered over with the same; but the whole of the residue of bricklayers' work is such as has been already explained. The *verandas* of *bungalows* are sustained either by strong wooden posts, or by pillars of masonry; their intervals are filled up with *jaumps*, before described, which may be raised at pleasure, to any angle, including about 10°, or 15°, above the horizontal; or they may be suffered to hang perpendicularly against the exterior faces of the pillars. In tempestuous weather, and especially during those violent squalls called '*north-westers*,' in consequence of their usually either commencing on, or veering round to, that quarter, it will be found necessary to place the bamboo props, whereby the *jaumps* are usually elevated, against their exterior sides; by which means the *jaump* is pressed to the pillar, and becomes greatly exempted from the danger of being blown away; which, nevertheless, frequently is its fate, although its weight may be full a cwt. and a half, or even two cwt.

The force of these *north-westers* is next to incredible! I recollect one in particular, which, in November 1787, tore up an immense tree, called the 'Barrackpore Beacon,' on account of its

being situated at a point where it could be seen from Duckansore, along a beautiful reach of the Hoogly river. This fine piece of timber measured nearly twenty feet in girth, and branched out in the most luxuriant manner, reaching to full seventy or eighty feet in height: it was torn up by its roots, though some of the ramifications were much thicker than my own body, leaving an excavation of not less than 15,000 cubic feet.

When stationed at *Hazary-Bang*, in the Ramghur district, my *bungalow* was, I firmly believe, saved from falling by mere accident. It had become fashionable to construct fire places in our halls, running up the chimnies, so as to pierce the thatches immediately below the summit of that wall in which the fire-place was made, and which served as the front face of the chimney. Cutting through the wall, to make a proper opening wherein to set the grate, I found that, in lieu of being firm, as it should have been, the whole cut like so much butter. In consequence of this discovery, I hastened the finishing of the stove, which, in a short time, aired the room, and completely dried the walls; but, not before they began to display very unequivocal tokens of what would have taken place, but for my very fortunate adoption of the whim then in vogue.

It is remarkable, that the *bungalow* stood on

a gentle declivity, from which the superficial water was well drained; but, the soil was proverbially spongy, and retained every shower, much the same as chalk, but without its good qualities: thus, notwithstanding the floors, (or tarrases,) were full two feet above the surrounding level, my habitation would, I am well convinced, have subsided; burying every inhabitant under its ruins! Probably, that fatal moment would have accorded with the height of some *north-wester*; to whose fury the catastrophe would, though erroneously, have been imputed.

The *verandas* of *bungalows* are generally allotted to the accommodation of servants of all descriptions; and, except where, as in Calcutta, a separate lodging-room is provided, serve for the home of whatever *cahars*, or bearers, may be employed. These have each their mat, on which they sleep, forming a pillow of any *g'hettry*, or bundle of cloaths, and covering themselves with their quilts, &c.; blankets being but very little in use among domestics of any description. When a gentleman has company, the side-board is usually set out in the *veranda*, where also the several guests' *hookahs* are prepared; and, in rainy weather, their water cooled. All servants come upon being called only; there being no bells hung in any part of the country, and very, very few even of hand-

bells to be seen. The common call, *Qui hi?* (meaning 'who is there?') often rouzes a dozen of the slumbering crew, though it is occasionally repeated, with some vociferation too, before one will stir. Although to many *bungalows* there are abundance of out-offices, some of which may have been built for the reception of palanquins, and especially of a gig, (there called a *buggy*,) few persons allow either their *mahanahs*, or their *boçhahs*, to be kept in such places, as they would be subject to various unpleasant purposes, whereby their interior especially would often be soiled: this objection acts likewise in some measure towards the common practice of retaining the gig, as well as the palanquin, within the *veranda*; the latter is easily lifted in and out by the bearers, but the former requires that a *ramp*, or slope, should be made, up and down which the *syce* (or groom) draws it with facility. All conveyances, when housed, are covered with a double cloth, usually made of *karwah*.

Throughout Calcutta the doors are pannelled, and have, generally, handsome brass mountings, with mortice locks; the windows are well glazed; and, in many instances, the rooms are laid with superb carpets, either of European, Persian, or Mirzapore manufacture: the two latter are generally made of silk; exhibiting not only rich patterns, but the most brilliant colors, at least equal to any made at our manufactories.

The floors, or, more properly speaking, the tarrases, are almost invariably covered with a matting made of a species of rush, which possesses considerable firmness and pliancy. This, after being duly cleansed from fibres, &c. is made up into bundles, about a cubit in length, and nearly the same in girth, in which state it is well soaked: from these bundles the mat-makers, who are usually of the *Cunjoor* tribe, weave the mats upon a kind of woof made of twine, but perfectly concealed by the rushes. Some of these mats are made plain; while others are in various stripes, or in chequers. With this manufacture a room of any size may be fitted; the work being either done on the spot, or at the houses of the persons employed; the color is generally that of faded straw; though, sometimes, red or black rushes, dyed for the purpose, are introduced. For the accommodation of persons residing in parts where they cannot have floors fitted with entire mats, long strips, of about a yard wide, and four or five yards long, are sold in almost every great *bazar* (or market). These require to be sewed side by side, the same as our Scotch carpeting; but, exclusive of that disadvantage, are not so eligible; both because they are less carefully made, and that, in almost every instance, they are manufactured from refuse materials.

In the upper provinces, where the *kudjoor*

(or date-tree) abounds, a very passable kind of matting is made of its leaves; it is true, this is not so durable, nor so handsome, nor so even, as that sort just described; owing to the coarseness of the materials, it is rather subject to catch the feet of chairs; add to this, the danger of fire from *hookahs*, &c.: all these circumstances limit the use of the *kudjoor* mats to very ordinary purposes; or, at the least, to laying down in such rooms as are to be wholly or partially carpeted.

Mats are likewise made, in every part of the country, from green bamboos; which, being split into very thin laths, of about half an inch, or less, in width, answer the same purpose as the foregoing; these are, however, very uncomfortable, and harbour centipedes by the hundred: the *kudjoor* mats partake of that objection, but not to the same extent. Mats, if we may so call them, are likewise made by laying down rattans, and stringing them together with strips of their own bark, the same as is done in making the *seerky* used in thatching; but this species is very rare: indeed, I believe only a few were ever seen in Calcutta, and they were said to have been brought by the Dutch from Malacca, whence great numbers of rattans are yearly imported. The price of the best rush-mats may be taken at about a rupee per square yard; that of the mats in strips at from four annas ($8\frac{1}{2}d.$) to

eight annas (17*d.*); but the *kudjoor*, and bamboo kinds, can only be computed by the demand for materials, and the prices of labor, locally: probably, taking all things into consideration, we may estimate a square yard of either at two annas, or about 4¼*d.* A very beautiful species of mat is made in some parts of the country, but especially in the south-eastern districts, about Dacca and Luckypore, from a kind of reedy grass, of which the rind, being pared off very thin, and trimmed to about the eighth of an inch in width, is wove into mats, rarely exceeding seven or eight feet in length, by about four feet in width. These are peculiarly slippery, whence they are designated '*seekul-putty*,' (*i. e.* polished sheets); their color resembles that of common horn, and their prices are generally from two to six rupees per piece; according to their fineness, and to the state of the markets. The principal uses of the *seekul-putty*, are, to be laid under the lower sheet of a bed, thereby to keep the body cool; which is certainly effected to a great degree by this device, by its remarkably slippery surface: some few pillows for couches are likewise covered therewith, and I have seen it employed in making covers for mahogany tables; to which it is well adapted, on account of its repelling dust: in such case, it ought to have all the joinings well taped, and to be lined with blanket, or with *karwah*, &c. properly quilted.

Exclusive of the carpets before mentioned, and which are very high priced, a manufacture of *satrinjes* is carried on at Mirzapore, and in many other parts. These serve all the purposes of carpets, but have no plush; being in that particular very similar to our Scotch carpeting; but, at the same time, very dissimilar in respect to pattern. The *satrinje* is nothing more than a very large colored sheet, in which, except for about a cubit's breadth all around, the whole is divided into bars, or stripes, usually from two to six inches wide, proportioned to the extent of the fabric. The principal colors in these carpets are crimson for a ground, with bars of deep, or light red; or blue grounds, with white, yellow, or tawny bars; or green grounds, with deeper, or lighter green, or crimson, or orange bars; or any of these, *vice versâ*. The common price of a wollen *satrinje*, may be from twelve annas (*i. e.* ¾ of a rupee) to three rupees per square yard; according to fineness, substance, color, demand, &c.

Of cotton *satrinjes*, the price rarely exceeds a rupee, or a rupee and a quarter, for the same extent; these, however, wash admirably. It is no uncommon thing to see a *satrinje* of full twenty by thirty feet; and this, too, made upon nothing more than a bamboo roller, round which the work gradually collects, as the threads are crossed, by passing the warp-lines, alternately

over and under the woof-lines, in regular changes!

Cheeks, or screens, to keep out the glare, made in a similar manner. These simple, yet most comfortable, addenda to our Indian habitations, are formed of bamboo wires, (if I may use the term,) from four to six feet in length, and about the thickness of a very large knitting-needle, or, perhaps, of a crow-quill. A thin, clean-worked lath, of the same material, is put at the top and bottom.

Many *cheeks* are made of bamboo wires, previously painted either green, or reddish brown, but generally the former. These require no particular care, further than keeping them separate, as they dry; which is usually effected by laying them upon two rows of bricks, or against a wall, or upon scattered straw, when the weather is calm. When *cheeks* are intended to represent any pattern, such as birds on branches, or Indian deities, &c., the whole of the wires are laid with their respective ends on two boards, over which two others are placed perfectly parallel, and even, so as to press the ends of the wires, and to prevent their being easily displaced. A pattern, being cut out on paper of the required size, is fastened down upon the wires, and its outline every where distinctly marked upon them; after which it is worked in on the former ground, say a green,

with brown for branches, a deeper green for the leaves, and red, yellow, &c., for the birds: the whole is then left to dry. When ready for use, the *cheek-wallah* (or maker) fixes his paratus close to the top, and, taking each wire in succession, fastens it down in its proper place, being guided by two lateral lines, as they are handed to him by an urchin, perhaps not more than three or four years of age! In this way the representation is preserved.

The neatest patterned *cheeks* come from China: but the Bengallee artist is getting fast forward, and bids fair to put a stop to the importation: it is usual to have the whole *cheek* bound, all around, either with a light cotton tape, of about three or four inches broad, or with red, or blue, *karwah*. At the top of each *cheek*, generally, a piece of circular leather is attached, two being sewed together, though on different sides of the wires; to these the cotton cords, usually white, or red and white, or blue and white, about an inch in circumference, and each a full yard in length, are sewed: their use is, to tie up the *cheek*, when rolled towards the door-plate, at such times as it is not wanted. Each end of the top lath has similar pieces of leather sewed on, for the cords by which the *cheek* is to be suspended.

It is understood, that white *cheeks* are preferable; both because they keep out the glare

much better, and as they render the interior less distinguishable to any spectator from without: consequently, they contribute most to coolness, and to privacy.

I believe it would be impossible to find any house inhabited by an European of respectability, in any part of Calcutta, which should prove to be destitute of proper doors, of pannelled wood, or of windows, at least, furnished with Venetians, if not with glass sashes. Whether for appearance, convenience, or real utility, certainly there cannot be any thing equal to glass, the use of which is now become so general, that almost every *bungalow* in the upper provinces, unless merely built as a shelter for a few months, is provided with glass; some, perhaps, only partially, but a great majority throughout. Were it not that this most agreeable improvement were attainable on what may be called very moderate terms, the great number of serious drawbacks it has to encounter, would assuredly cause its exportation to the East to be very limitted. The principal objections to its use, are, 1stly, the difficulty of getting glass cut to fit the sashes; 2dly, the aptness of even the best seasoned wood to warp, so as to cause the panes to fly; 3dly, the difficulty which frequently exists of getting glass at all; especially of the larger sizes.

As a balance to this, we find, that this brittle

commodity, after undergoing all the risques attendant upon shipping, and landing, together with all the dangers of the seas, and much occasional rough usage after being consigned to the up-country trader, can usually be sold at Futty-Ghur, or Lucknow, which are each distant about a thousand miles, by water, from Calcutta, at the following prices: panes of 8 by 11 inches, at about twenty rupees per *coorge*, (or score,); 10 by 14, at about twenty-six rupees; of 12 by 16, at about thirty-two; of 15 by 20, at about forty; of 18 by 26, at about fifty; and of 20 by 30, at about sixty rupees. These prices give little more than cent. per cent. upon the wholesale prices of London. What with the necessity for making those panes and sashes, which are exposed to the sun, very firm, as well as from a due attention to economy in so expensive an article, we generally see, in the upper provinces, the panes laid transversely, instead of upright; and only one row of such panes in each frame; the wood-work being made very broad, so as to occupy a large space. The light thus admitted, is found fully adequate to every common purpose; the atmosphere being, for full eight months out of the twelve, perfectly clear; and there being rarely any buildings to debar the full enjoyment of that blessing: besides, that great exposure to an unclouded sky, which may in England be deemed highly

advantageous, would, in India, prove objectionable; by admitting so forcible a glare as must give more uneasiness than pleasure.

When glass either cannot be had; or, that, owing to some speculator having monopolized, the price is considered too high, it is not uncommon to see windows furnished with plates of *talc*; which may be obtained, in almost any quantity, at the several cities, especially towards the frontiers; very extensive dealings being carried on in this article, by persons resident chiefly at Lucknow, Benares, and Patna, who import it from Thibet, and the countries on the north of the Punjab, or Seik territory, in masses, often as large as a quartern laof. The principal intention of such traffic is for the supply of that fine powder, used in the Hindu holiday, called *hooly*, which may generally be viewed as the carnival of that sect.

The masses of *talc* commonly sell for about a rupee and a half, or even up to two rupees per seer (of about two pounds avoirdupoise): when good, it is of a pure pearl color, but it has, ordinarily, either a yellowish, or a faint bluish cast; by means of proper tools, this mineral may be split into very thin leaves, which often present smooth surfaces, but are apt to have little scaly blisters, that greatly deteriorate their value. However, a seer of *talc*, that splits well, will sometimes yield a dozen or more panes, of about

12 inches by 9, or of 10 by 10; and thus, according to the form of the lump; which can only be split in the direction of its laminæ. These panes are so far diaphanous as to allow ordinary objects to be seen at about twenty or thirty yards tolerably distinct; and, of course, present an excellent substitute for glass.

I am surprized that the very simple process whereby *talc* may be vitrified, has not encouraged some ingenious person to establish a manufactory for that purpose. When combined with alkaline salt, (every where attainable in India,) it is fusible in a strong heat, and forms a transparent, handsome, greenish-yellow glass. If equal portions of *talc* and of chalk be melted together, with one-fourth part of borax, (the *soohaugah*, or tincal, so abundant throughout the East,) the mixture will produce a fine pellucid, greenish glass, of considerable lustre and hardness; gypsous earths, (which, though not brought into use, are supposed to abound in some parts of Bahar, and of the upper provinces,) may be advantageously substituted for chalk, whence the result will be a rich, pellucid, yellow glass, of equal brightness and durability.

Speaking of chalk, I must remark, that very large quantities are occasionally sent to India, notwithstanding some of the hills at the back of Raje Mahal abound therewith. I understood, many years ago, from an old friend, who was

quarter-master of a regiment stationed at Monghyr, distant about fifty miles from the former place, that, in consequence of a scarcity of musquet flints, he had sent people to the Chalk Hills of Raje Mahal, whence he had obtained a boat-load, that answered admirably. In reply to my questions regarding the chalk, he informed me it was very coarse. But he forgot, that, by dissolving it in a large quantity of water, and allowing the rubbish to sink, the finer particles would be for a while suspended; and, on being poured off, would, after repeated washings in this manner, yield the purest whiting. It really appears surprizing, that those chalk hills should remain unnoticed; and, that even the lime-burners should neglect to take advantage of their being so advantageously situated among wildernesses of fuel, and within a mile of the great channel of the Ganges! That the Company should ever send out whiting, or put themselves to the expence of millions upon millions of gun and pistol flints, when they possess such a quarry, (of which the extent is not known,) appears highly inconsistent with that economy so much and so properly studied. If it be argued, that some impolicy might exist in shewing the natives how to provide themselves with flints; the answer is very easy; for the gun-smiths of *Monghyr* are fully apprized of the whole process.

But, surely the chalk cannot be accused of the same dangerous tendency! To say the least, government might, with great advantage, cause all the lime required for their own works to be made from it; imposing a price upon all that might be dug by merchants, or others; as they do at their stone quarries, near *Chunar-Ghur*, &c. My readers will, at all events, discover that a very useful glass might be made in India, the duty on which would produce a much larger sum than the whole amount of profits accruing to our exporters. It is, indeed, a well-known fact, that the captains of Indiamen take out window glass more with the view to making up a general assortment, than from any great advantage arising from its sale to the *European* shop-keepers, &c. In time of peace they are invariably undersold by foreign traders; who carry out glass of an inferior quality, which sells to a certain extent; and is often rather sought, than rejected, on account of its greenish hue, which is found to soften the light considerably; especially in exposed situations.

The natives do, occasionally, make a weak, greenish, and blistered glass into *caraboys*, or great bottles for rose-water, and into lesser ones, such as the *gundies*, or itinerant perfumers, use; but this is on a very small scale, and chiefly supplied from broken tumblers, shades, &c., of

European manufacture. There are persons at Patna, who have men constantly employed in purchasing broken glass, of every description, from the servants of Europeans, and in collecting such fragments as may be thrown out among the ordinary rubbish.

It must occasionally happen, that neither glass, nor *talc*, can be readily obtained; in which case, the best mode is to make light frames, and to pannel, or fill them up with wax-cloth, neatly nailed on. This is an admirable substitute, not only keeping out wind, rain, and dust, but, in the cold season, preserving the warmth of rooms, yet admitting sufficient light for ordinary purposes: I have very frequently resorted to this expedient, and even to frames of oiled paper; all I had to regret was, that they debarred my seeing what passed abroad. To a person just arrived from Europe, such would appear a most distressing privation; but, after experiencing a few seasons behind *tatties*, without being able to enjoy the light during the whole day, and that for months together, such recluseness would scarcely be considered worthy of notice: so true it is, that we gradually become habituated to the loss of ordinary enjoyments, of faculties, and even of civil and religious liberty!!!

Although *bungalows* have not any ceilings of plaster, they are rendered inconceivably neat

within, by means of a double sheet, made of very coarse cotton cloth, called *guzzy*; of which tents are usually constructed. These sheets are fitted to the several apartments respectively, are bound with strong tape around, and have, besides, various tapes forming an union cross of eight limbs, or rays, all meeting in the centre. As the cornices commonly project near a foot, abundance of space is left for lacing the sheet (called the *chandny*,) to battens, nailed to pegs built in the wall: these battens being firmly secured all the way round, about an inch above the cornice, admit the sheet to be strained very tight, so as to bag very little, if at all, in the centre. Some white-wash their *chandnies*, and take so much pains in establishing a firm appearance, as to render them very similar to well made ceilings. Without this last mode of preparation, music has no effect in a *bungalow*; indeed, at the best, the most powerful instrument is heard under very great disadvantages, owing to the number of apertures, the *satringees*, mats, couch and table covers, &c., all which deaden the tones considerably.

Those who are very particular in whatever relates to their furniture, &c., have their *verandas* lined in the same manner as their apartments, giving them a finished appearance; but, in such exposed situations the cloths are apt to

collect considerable quantities of dust, which is perpetually set in motion by the shaking of the cloths when acted upon by the wind: on this account *seerky* appears to me far preferable as a lining for *verandas*.

The usual expedient, when doors of any description are not made, is to provide *purdahs*, made of *karwah*, (or *guzzy*,) or both mixed in perpendicular stripes of eight or ten inches wide each: some, especially those who are stationary, make their *purdahs* of shalloon, perpet, or very coarse broad-cloth, in the following manner. The cloth is made into two sheets of equal dimensions, say nine feet by six, and having strong tapes, perhaps five or seven in number, inserted cross-wise between them: these tapes are double. The whole circumference of the *purdah* is then sewed very neatly, and bound with tape, corresponding with the color of the cloth, and the ends of the tapes are also bound by means of leather, covered with the same materials. Between every pair of tapes, a bamboo, of a small kind, but very tough, is introduced; or, perhaps, a stout lath made from a bamboo of the large sort. These sticks, or laths, serve to keep the cloth stretched out, and when the *purdah* is suspended, much in the same manner as has been explained for the mounting of a *check*, lie horizontally; thus preventing the wind from blowing in the *purdah*.

It is observed as a general rule, always to make a *purdah* full a foot wider on each side than the door way it is to conceal; also to carry it a foot above the door plate, and to have a portion, about a foot in depth, without any lath, at the bottom, so as to trail a little on the ground. Those *purdahs* which are made of *karwah*, or other cotton stuff, are generally quilted with cotton, or are composed of many folds, or have course blankets inlaid between their outer coatings. The last is by far the most effectual, most neat, and most durable mode of construction: but, at the best, *purdahs* are a very indifferent make-shift; and, though often, from necessity, applied to windows, are by no means answerable to their intention. Their best use is certainly to deaden sounds; hence, they are advantageously suspended outside the doors of sleeping, or other retired apartments; when, by closing the doors, privacy and quiet may usually be effected. The presence of a *purdah* usually indicates the exclusion of males; and that the apartments, within that entrance, are devoted to the accommodation of ladies; except when rolled up, and tied, as has been explained in regard to *cheeks*.

The best timber for building, in wha ever branch, is the *sygwam*, or *teak*; but its dearness prevents its general use, especially since naval architecture has been so much an object of spe-

culation at Calcutta. However, it can generally be purchased at about a rupee, or a rupee and a quarter, per foot: making its utmost price about three shillings and three-pence. Those who build houses of the first class, rarely fail to lay all their tarrases upon *teak* joists; both because they possess superior strength, and that they are far less likely to be attacked by the white-ants. This has been attributed to the quantity of tannin contained in *teak*-wood, which some have asserted to be a perfect preventive, or antidote: but, after having seen those noxious insects devouring shoes and boots by wholesale, I can never bring myself to accord with such an opinion. There is, in *teak*-wood, evidently some property, hitherto occult, that repels the white-ant, at least for some years, but which is doubtless diminished by exposure to the air; as we find that very old *teak*-timbers become rather more subject to depredation, than new ones. The greater part of the *teak* used in Bengal, and at Madras, is imported from the Pegu coast, in immense beams, and in spars, planks, &c., of all sizes. It is by no means unusual to see the squared timbers measuring from forty, to fifty, feet in length, and averaging from fifteen to twenty inches in diameter. Here is food for our dock-yards!

It would certainly be attended with consider-

able benefit to the public, if that occult principle, or matter, which apparently exists in the *teak*-wood, enabling it to resist both the white-ant, and the river-worm, could be ascertained; it might be possible to impregnate, or to saturate, other timber in a similar manner. This is the more essential, because we have abundant proofs that mere hardness does not deter these voracious insects, which are found at times even upon the lignum vitæ! But the principal object, so far as relates to naval purposes, is, that the *teak*-wood certainly is, in a great measure, devoid of the gallic, or any other, acid; or, if such is present, it assuredly must be in a very limitted portion; since the nails driven into *teak*-wood are never corroded so as to decay the surrounding wood, and to liberate it from confinement. To this decay, called 'iron-sickness,' are attributed many losses of ships, supposed to have foundered at sea, in consequence of planks starting; which must often happen when the wood embracing a nail is destroyed by the acid, or by the action of salt water upon the iron. In repairing ships built of oak, many nails are found perfectly insulated, by the wood having been rotted, and fallen away; which has never been the case with vessels built of *teak*.

The generality of apartments being large, the halls measuring perhaps from thirty to forty

feet in length, and from sixteen to twenty-four in width, and other rooms in proportion, it is evident that very substantial, as well as long, timbers must be requisite to support their flat roofs; for, with a few exceptions, truss-roofs are not in use. The mode introduced by Mr. Lyon, the Company's architect, at Berhampore, certainly contributed greatly to reduce the quantity of timber in a roof, but it rendered it absolutely necessary that every timber should be perfectly sound. That gentleman, whose professional skill, and excellent social qualities, demand an ample tribute, exploded *burgahs*, (or smaller battens,) from the roofs he constructed; and, in their stead, threw arches from the centre of one to the centre of the other timber; so that the intervals between the timbers were to appearance grooved, or fluted, longitudinally. This, however, was barely distinguishable, the arches being very elliptic; rarely, indeed, including more than an angle of six degrees, on a circle having full ten feet of radius.

Hence, it will be seen, that the joists were tolerably close, but their diameters admitted of considerable reduction, on account of the continuity of such a series of arches, which gave great solidity; and, by their mutual pressure, admitted that a joist should be freely removed, without in the least affecting the roof.

The houses built and inhabited by the natives, invariably have flat roofs. In these the apartments are, for the most part, extremely narrow, and dark. The *verandas*, where any are made, consist of arcaded fronts, invariably indented gothic; and have pillars, either of an hexagonal, or of an octagonal, form, resting on short pedestals, while the arch may be seen to breck off rather too suddenly from the shaft, which continues up to *baisez-mur*, (or *bassimere*, as our architects vulgarly call it,) and divides the upper part into various compartments, all of which are ornamented with a profusion of carved work. In almost every Hindostanee building, of this description, there will be seen an odd number of arches, to which others in the main part of the edifice generally correspond. The chambers, if so we may call them, are taken off from the ends of the halls, by similar arcades; each of which, as well as those of the exterior, is furnished with a *purdah*. These narrow slips have no windows, or, at the best, only small loop holes. The intention of such oven-like recesses would perplex an European unacquainted with Asiatic customs, but he would soon find that, in the cold season, such are peculiarly warm, and that, during those months in which the glare is obnoxious, they remain cooler than such as admit more light. Almost every house is furnished with some means of ascending to the

chut, (or flat tarras-roof) whereon the natives often pass the evening, causing the heat to be first abated, by means of several pots of water, which throw up a steam fully indicating the temperature at which the tarras had arrived. The natives are not partial to upper-roomed houses in general; though they affect to pride themselves greatly in the possession of *doo-mau'ahs*, that is, of houses having a second floor: it seems that ostentation is the reason of this predilection in favor of ground floors, whereon all their attendants, &c., may be seen from the level of their *compounds* (or enclosed areas). The stairs, where any exist, (for sometimes a very mean boarded ladder is made to answer that intention,) are narrow, steep, and unsafe: these are almost always built of solid masonry, as far up as the first turn, (or landing place,) after which they commonly consist of small bricks laid edgeways in lime mortar, supported by stout timbers, placed at a proper angle, and resting on the proximate joist of the upper floor. In every Hindostanee house, the doors are very low, and often are made to open into a long arcaded *veranda*, running the whole length of the interior, much the same as in our inns: while, in the front, or towards the road, a hanging balcony is sometimes made, supported on continuations of the joists, of which the extremities are carved

into grotesque forms; such as the heads of alligators, or of tigers, or of serpents, and not infrequently of little human figures, whose size and squat position strongly put us in mind of a *fœtus in utero*.

Saul-wood is used to an immense extent, both in buildings, and in the construction of ships, but is not to be compared, either for toughness, strength, resistance against insects, or durability, with *teak*. Its price is much in favor of general service, to which its great size, and admirable straightness, are considerable, and valuable recommendations; but it is extremely apt to crack, though not to snap; especially when exposed to the weather. There is something very peculiar in *saul-wood*; since it is seen to warp, even after having been employed in bulk for many years, riving into large fissures longitudinally: the white-ants also devour it with avidity. Mr. Lyon, already noticed, when he was building the General Hospital at Berhampore, caused an immense copper trough to be made, in which he boiled the beams intended for that edifice: some were boiled in pure water, others with tannin, and some with arsenic; under the hope both of seasoning the timber, and of giving it a repellant, or preservative quality. This ingenious, and highly praise-worthy experiment, was by no means successful; for, although, in the first instance, the timbers seemed to defy the

white-ant, especially those boiled in the solution of arsenic, still they were not completely secured from depredation; while, on the other hand, nine in ten rived so dangerously as to demand immediate props, and ultimate removal.

Many authors have recommended the boiling of timber, planks, &c., with a view to extract the sap, and thus to season them out of hand; but they have invariably neglected to furnish us with the results. Now, I have ever held it necessary, that medical practitioners should keep a register of the obituary, as well as of the convalescent department, in order that we may know how to *avoid* certain systems; which, doubtless, for want of such a guide, or caution, have been repeatedly resorted to by various medical characters, who, insensible of those fatal effects that had attended former experiments, thus consign many patients to their graves! So should all experiments, such as that above recorded, be fully laid before the public, and their results be candidly detailed. It is evident, that where we see only the suggestion, without the proofs of its failure, we must frequently be induced to adopt hints of a most pernicious tendency.

Saul timber, when used in buildings, ought always to have its ends completely open to inspection; both to prevent the white-ant from preying upon it under cover, and to insure its being duly aerated; without which, however

charred and tarred it may be, rottenness will speedily take place. This arises from being bedded in masonry, which, during the rainy season, even under the best roofs, will absord a large portion of moisture, that will, infallibly, in time, penetrate into the timber. It must be recollected, that not one in hundreds of the houses in Calcutta, or that are built on their plan, contains a fire-place: hence, during some months in the year, the walls will exhibit various indications of moisture, even to their very cornices; though this will often depend upon the proper selection of sand for mixing in the plaster. It is now well known, though not long since discovered, that all sand, taken up within the flowing of the tides, is strongly impregnated with salt, which will keep the mortar wherein it is mixed eternally subject to damps; notwithstanding the tarrases may be flued, or be founded upon pots. I have known several, otherwise highly eligible, houses rendered untenable, merely by this incautious use of river sand; which occasioned whatever mats, or carpets, were laid down, to be speedily rotted. The fault was at first imputed to the vicinity of the river, whence it was suspected the damps were received; but it was ascertained, that such tarrases, and mortar, as were compounded of pit-sand, remained dry, and free from so obnoxious a defect. Nevertheless, the greater part

of the buildings, in and about Calcutta, receive a certain portion of river-sand, taken up within the reach of brackish water: while this practice is allowed, the walls and tarrases will remain subject to occasional moisture; and, as we daily see in that city, the plastering will blister, or, indeed, become mottled, and obviously unsound.

Saul-timbers are found in all the forests, ranging under the hills, branching our possessions from Assam up to Hurdwar; they are more abundant in some parts than in others, but no where scarce. Many of these forests present thousands upon thousands of acres, whereon the *saul*, *sissoo*, and other useful timbers grow spontaneously; offering to us an inexhaustible depôt! The only consideration is, that water-carriage should be at hand. The Indian wood-feller, who pays not more than sixpence, or a shilling, for each tree he may choose, and which may, perhaps, contain from sixty to a hundred feet of timber, considers it a bad speculation, if some river be not within a stone's throw of the selected wood: his object is to lop and bark as fast as he can, and then to launch the tree into the river, there to be fastened to others, intended to form a raft, or float, which, being secured to a boat, may glide down with the current to some established market. His expences are very trifling; for, with the exception of some duties, most injudiciously

imposed, his adventure will not cost more than two-pence per foot, when arrived at the place of destination; where it may commonly be sold, without risk or delay, for full three times that sum. Few *saul-timbers* measuring a ton, or even a load, (*i. e.* forty, or fifty, cubic feet,) stand the owner in more than three rupees when landed at Patna; where such always meet with a very ready sale, in whole rafts, at nine, ten, and sometimes up to fifteen, rupees per stick, (or timber;) and this, notwithstanding the number of competitors in the trade. Those competitors rarely prove injurious to each other, while they render great service to the public, by preventing the whole trade from falling into a few hands. Thus, the prices of *saul-timber* are not only kept down, but, in general, owing to occasional gluts, seasoned timbers may be, to any amount, purchased at the several *ghauts*, or wharfs.

The mode of floating timber being so very different from that in use with us, I offer a description of it, under the hope of its affording at least some variety, if not some useful information. A common *pulwar*, (or *paunchway*,) of perhaps thirty feet in length, and six or seven in width, is equipped with two sticks of *saul*, say forty feet long, and two feet in girth: these are placed across her gunwales, at right angles with her length, and about six feet from her

centre, and very firmly lashed down. The boat, being in about three feet water, has a tree brought up to each of her sides, where they are respectively lashed to the cross timbers, and thus, in succession, until she is judged incapable of receiving more burthen. In the centre of the boat, a small cabin is generally made, either of thatch, or of arched bamboo laths, covered with *durmah* mats: in this the crew are sheltered at night. It is highly expedient to avoid launching such rafts when the river is at the fullest, or the current any way prone to deviate from the deepest channels, as it must do in great floods, on account of the waters finding, for a while, passages along hollows among the inland parts; that is, beyond their limits in ordinary seasons. When a float of timber once gets over the river's bank, it must be the result of great good fortune, if the channel is ever regained. Hence, when the waters are falling, it is common to see very large pinnaces, *budjrows*, and boats of burthen, left upon some sand, on which they had struck, but which the rapid ebbing of the floods prevented them from quitting! In such cases, some are allowed to remain until the ensuing year, when the floods lift them; others are unladen, and, by means of the joint efforts of hundreds of villagers, are pushed along the sands to the deep water; while those which appear

unequal to such a severe operation, are generally broken up, and sold for various purposes.

When a float of timber becomes thus situated, the best way is to cut the ropes of at least half the exterior sticks on each side, and so to lighten the boat, that she may be carried into a depth suited to receiving them again: but this operation, which, on paper, appears very simple, requires great exertion, and no less despatch; as the strength of the current, which often runs six or seven miles within the hour, renders it extremely difficult to manage such immense logs; especially as they are very apt to sink into the sands. We commonly see several floats in company, proceeding, when the reaches are straight, and the waters deep, with great regularity; the boatmen, in such situations, having little to do, sit smoking their *nereauls*, with great composure: sometimes a sail is hoisted, but, for the most part, it is deemed expedient to check, rather than to accelerate, the progress. Almost every float, or, at least, every company of floats, has a canoe attached to it; which, in doubtful waters, precedes, and directs the men in charge of the respective vessels, who, by means of *luggies*, (or bamboo-poles, from twenty even to fifty feet in length,) fend off the floats from banks, or guide them along the deep water: without such pilotage, they would

be in perpetual danger of grounding, the inconveniences of which are, as above shewn, by no means inconsiderable.

Floats of timber cannot well come to an anchor, except in very still water; hence, they are usually brought-to under steep banks, where there is great depth; and where, in case the river should fail during the night, they would not be left high and dry.

The greatest danger to which a timber float can be exposed, is that of running upon a sunken tree, which, having been washed away, by the bank whereon it stood being undermined by the strong currents, is hurled away into deep water, where it probably lies exposed to view for the first year. During the hot season, when the waters are low, the boughs are often cut away by persons in want of fuel; or, perhaps, they are torn off by the succeeding rains, so far as to cause their being concealed a foot or two under the surface. When thus situated, they throw up a deal of water, so that their locality may be ascertained at some distance; but, owing to heavy mists, and especially to clouds of sand, they frequently are not discovered by the boatmen, until it becomes impossible to avoid them.

If the *pulwar*, *i. e.* the supporting boat, strikes upon one of the branches, her bottom will infallibly be staved in; and, in all probability, the immense body of water bearing upon the

timbers, will either tear them away from the *pulwar*, or carry off her upper works, leaving her bottom entangled. In either case, the situation of the boatmen becomes highly critical; but, as they generally are expert swimmers, (though, strange to say, some *dandies*, have, like Falstaff, 'a wonderful alacrity at sinking,') few are drowned on such occasions. The timbers, however, rarely fail to find the bottom, so soon as their buoyant companion is wrecked.

The great number of trees thus immersed, some of which equal our largest oaks, render it extremely dangerous to go down with the stream during the night; in some strong waters, such impediments are numerous, and render the navigation very hazardous, even during the day time; especially should a *goon*, or track rope, give way just after getting a boat above them; when this misfortune happens, the chances of escape are comparatively small indeed.

When boats, heavily laden, strike upon a tree, they sometimes go to pieces, in consequence of the water's rapidity; but, when so entangled as to be pierced in several parts, they very generally remain entire, presenting, as the waters subside, the very curious spectacle of a vessel, perhaps carrying twelve or fifteen hundred maunds, sitting, as it were, among the boughs, often ten or twelve feet above the

surface of the stream. It is by no means unusual, in the course of a week's travelling, to see one, or more, of these disastrous elevations; more especially about the month of October. The misfortune is, that, though the cargo may, perhaps, be saved, if not of a perishable nature, such as sugar, salt-petre, &c.; yet, that the vessel, however expeditiously emptied, can never be got off; consequently, she must be broken up.

With respect to the prices of *saul* timbers, we generally find them to be nearly the same, year after year, at the same places; provided a sufficient number, but not a great glut, should arrive within the proper season. On an average, near Patna, the cubic foot will cost about sixpence, at Moorshadabad, about a shilling, and, at Calcutta, about two shillings, or even half-a-crown. An extra price is, of course, put on timbers of superior dimensions, while the smaller kinds, called *bautties*, which rarely contain more than eight or ten feet, are, in an opposite degree, depreciated. The *saul* is a very solid wood, at least equally so as elm, but has not its pliancy, nor is it quite so apt to split: its grain usually runs tolerably even; it is likewise heavy, yet by no means so ponderous as *teak*: both, like many of our firmer woods, sink in fresh water.

In the upper provinces, some very fine oak

timbers are occasionally to be seen: these are chiefly of a peculiar kind, nearly approaching to chocolate color, extremely difficult to cut up, and, consequently, very heavy: this last characteristic gives them the name of *seesah*, or, lead-wood. The prices of these trees, which generally measure about the same as the *saul*, from the same forests, (namely, from the neighbourhood of *Peelabeet*,) rather exceed those of the latter description; and would probably be greatly enhanced, if the natives stood in need of such very substantial wood for any of their buildings, or manufactures. The fact is, that the carpenters generally endeavor to dissuade their employers from purchasing oak, by representing it as subject to many defects; though the true reason is, that its hardness infallibly causes more grinding of, than working with, their tools; which are almost always either too much, or too little tempered. At Futty-Ghur, *saul* timbers commonly sell for full eighteen-pence the foot, and oaks for about two shillings. I recollect buying some of the former, that measured thirty feet in length, with an average squaring of fourteen inches, for twenty-eight rupees each; and oaks of the same dimensions, or nearly so, at thirty-five: but wood was then extremely scarce, and at full twenty per cent. above the ordinary rates.

The great aptness of *saul*-wood to warp, we

should suppose, might have favored the importation of oak, notwithstanding the outcry against its flinty hardness: and such would doubtless have been the case, had not another kind of wood, possessing a very fine grain, and rather handsomely veined, been abundant. This, which is called the *sissoo*, grows in most of the great forests, intermixed with the *saul*; but, in lieu of towering up with a straight stem, seems partial to crooked forms, such as suit it admirably for the knees of ships, and for such parts as require the grain to follow some particular curve. This wood is extremely hard, and heavy, of a dark brown, inclining to a purple tint when polished; after being properly seasoned, it rarely cracks, or warps; nor is it so subject as *saul* to be destroyed by either white-ants, or river-worms. The domestic uses of *sissoo* are chiefly confined to the construction of furniture, especially chairs, tables, tepoys, (or tripods,) bureaus, book-cases, ecritoires, &c. &c. for all which purposes it is peculiarly appropriate, with the exception of its being very ponderous. This objection is, however, counter-balanced by its great durability, and by the extraordinary toughness of the tenons, dove-tails, &c. necessarily made by the cabinet-maker, or joiner. *Sissoo* is, of late, more employed than formerly for the frame, ribs, knees, &c. of ships, especially those of great burthen: for

such, it is found to be fully as tough and as durable as the best oak. When timbers can be had of this wood long enough for the purpose, it is often applied for bends, and, indeed, for a portion of the planking, or casing; but it is very rarely that a plank of ten feet can be had free from curve. Though admirably suited for stern and head-work, it is neither long enough for keels in general, nor sufficiently uniform in its diameter for the supply of stern-posts. Some *sissoo-trees* grow to a great weight; but, unluckily, the devious directions of their boughs render it necessary to lop them away for minor purposes: if, instead of dividing into several large branches, at perhaps only ten or twelve feet from the ground, one large stem were to rise, however crooked, to double that height, there would be a great encrease of substance; as it is, however, we may account it an excellent timber indeed that measures a ton (*i. e.* forty cubic feet).

This inconvenience is greatly augmented by the slovenly manner in which trees are felled throughout India. There, it is common to see the axe (for no saws are used on such occasions) laid to the stem often at a yard or more from the soil; while, at the same time, full a cubit in depth is destroyed in widening the orifice, so as to penetrate into the heart: this creates considerable loss, which is frequently rendered still

greater by the irregular manner in which the butt rends when in the act of quitting the root, or stool. If this wood were more scarce, probably greater pains would be taken to make the most of its length; as it is, we see, that, even those ship-builders who occasionally send their agents into the *Morungs*, or great forests to the north of *Bahar* and *Purneah*, allow the same loss to take place; thus disqualifying the timbers from more general, as well as more important, adaptation. The price of *sissoo*, for the most part, runs about twenty-five, or even to forty per cent. above that of *saul*; but, in many places, up the country especially, where naval architecture is not in view, their values are generally about equal. In such situations, it is less an object of import; since its utility is greatly circumscribed, and, in a great variety of instances, superseded, by the *baubool*, (a species of *mimosa*, generally growing wild,) whose crooked billets are deservedly in great estimation, and whose bark is considered to be, if any thing, superior to that of oak for the tanners' use.

I should have remarked, that, in some parts of the country, especially along the western frontier, a small kind of *saul* grows wild: this rarely exceeds six inches in diameter, and is commonly used entire, in lieu of bamboos, for enclosures, rafters of *bungalows*, &c. It is very peculiar that this wood cannot be trusted for any

length of time, even under a thatch; it being subject to the depredations of a very small insect, called the *g'hoon*, which perforates it in a thousand places, depositing its eggs, which are very numerous, and absolutely rendering the rafter a mere honey-comb. During the day, these mischievous little devils are commonly quiet, but, after night-fall, when all else is still, may be heard in every quarter! A person unaccustomed to the sounds, would suppose that a very heavy shower of hail were falling on the thatch. In the course of two or three seasons, sometimes in much less, the rafters will be found to give way; on examination, they appear as though pierced with large awls; and, when struck forcibly with a hammer, yield a cloud of yellowish powder, resulting no doubt from the labors of the multitude of inhabitants. The *g'hoon*, which rarely exceeds the sixth of an inch in length, is of a chocolate color, very hard about the head, has firm exterior coats over its wings, and terminates abruptly behind, giving the exact appearance of its rump having been burnt off. Those timbers which are used immediately after being felled, as usually happens, are certainly the first to be attacked by the *g'hoon*; but, so far as my own observations went, and according to the experience of two years, in a quarter where we used scarcely any other kind of wood for rafters, even a year's seasoning did not afford

security against, though it obviously retarded, their attacks. Possibly, if all of this description of *saul* trees intended for rafters, were to be immersed in some of the very numerous puddles every where abounding in their vicinity, and of which a great majority are strongly impregnated with minerals, particularly iron, copper, and sulphur, the *g'hoons* might be altogether repelled: the immersion should continue for a year or two; the trees being previously allowed to season standing, by cutting away a circle of bark, about six inches wide, near the ground, that the flow of sap might be discontinued. We find no mode to answer so well as this for our climate; in India, the advantages would be still more extensive, in consequence of the regularity, and particular effects of the three great seasons, into which the year is there naturally divided. It is curious, but true, that the *g'hoon* acts less upon such timbers as have been squared, than on such as have only been deprived of their bark; and, that in the large species of *saul*, that is, such as is used in most parts of the country for great buildings, &c., it either is unable, or not disposed, to burrow.

Intermixed with the smaller species of *saul*, though by no means abundant, we find another tree, bearing, in common with the oak, the designation of *seesah*; and that, too, owing to the great specific gravity of its wood: this,

however, does not grow to any size, but appears admirably suited to many of those purposes for which lignum vitæ, and ebony, are now used.

In the same jungles with the foregoing, a most remarkable tree is sometimes found, of which the interior is of a very dark color, nearly approaching to black: hence, the natives call it the '*cowah*' (or 'crow-tree'); but, from the hardness of its wood, it certainly might, with propriety, be termed the '*iron-tree.*' The carpenters seem to view it much in the same light with the black-oak of *Peelabeet;* and, doubtless, tremble for their tools, whenever the *cowah* is to become subject to their labors.

Although such *bungalows* as are built with a view to duration, are sometimes built of the best materials, and have every part of their roofs sustained by rafters of the best *saul*, by far the majority of such buildings, and nearly all at the military stations, are constructed on a much cheaper scale, having only *mango-wood* rafters, door-plates, &c. The great abundance of *mango* trees, added to their being easily worked, and their growing in general with stems sufficiently straight to furnish beams, of perhaps two feet square, and from fifteen to thirty feet long, give them a decided preference over every other kind of wood brought from any distance. Formerly, a gentleman could send out his servant, with

wood-cutters, sawyers, &c., to fell whatever trees might be found suitable to his intentions, without any questions being asked; but of late, and especially since the introduction of the *Mocurrery* settlement, (which will be hereafter explained,) the *zemindars*, (or land-holders,) and the *raiuts*, (or peasants,) have set a value upon every twig that grows, and invariably demand from one to four rupees, for such *mango* trees as may be felled for the use of any European; especially in the military. As to a Company's civil servant, either the hope of his favor, or the fear of his resentment, generally is found to seal the mouth of the pretended proprietor of the soil; who even is assiduous in furnishing workmen and conveyance on most occasions of this description. I must caution my readers against entertaining any sentiment unfavorable to the gentlemen alluded to: the adulation in question results entirely from that servile, abject, and crafty disposition, for which the *zemindars* are notorious where their interests are any way implicated. They judge of our collectors, magistrates, &c., as they would of their own; at least, so far as to suppose that courtesy will secure their good-will; but, they are, at the same time, thoroughly sensible, that in all public, as well as in all private, intercourse, the Company's servants act with the most conscientious propriety, and with

the most undeviating attention to justice. It matters not that this character may be repugnant to some proofs existing of former rapacity, and extortion; which may now be deemed obsolete, or, at the utmost, only existing to such extent as must be expected under every form of government, and among every race of people, in spite of the utmost vigilance.

The wood of the *mango* is much like that of the *plane-tree*, but rather more tough, and its fibres rather coarser: nevertheless, it is in very general use for rafters, door and wall-plates, frames for windows and doors, especially of out-offices, pannelled and plain doors, floorings of factories, and drying-rooms; likewise for wine chests, indigo boxes, roofs of *budjrows*, and a thousand other purposes, both of individual convenience, and of mercantile service. It is, however, particularly subject to the *white-ant*; and, unless carefully preserved from damp, will speedily decay: its being very light, and easy to work, are points much in its favor. Though we consider a *mango-plank* to be at least at par, when it measures twenty inches, or two feet, in width, yet great numbers may be had, by research, of double that breadth. My carpenters once felled a tree, which proved too large for any saw I could obtain in that quarter.

Sometimes we see very old tables made of *mango-wood*, which exhibit some beautiful veins,

and acquire a substantial polish; but, such can only attend a very careful choice of planks, which must likewise be seasoned, and be worked to great advantage: otherwise, a *mango-wood* table will appear singularly coarse and mean.

As to the tree itself, much may be said in its favor, though, owing to the stiffness of the leaves, it cannot be termed graceful: its deep green, contrasted with the white spindling blossoms, (much resembling those of the horse-chesnut,) and its abundant foliage, give it a richness, and render it peculiarly gratifying to the eye; especially as it is in its greatest beauty during the early part of the hot season, when the grass begins to parch, and the surface of the soil changes from that agreeable verdure produced by the rains, and, in some degree, cherished by the succeeding cold months, to a very sombre russet! The fruit does not run much risque after the blossoms have once fairly set; though, sometimes, severe blights occur, which render the whole abortive; when about the size of a very large gooseberry, the young *mangoes* make excellent pies; not unlike those containing apples, but with a certain terebinthinic flavor, which does not always please in the first instance, but soon becomes palatable. When about half grown, that is, beyond the size of a large walnut, they are in good order for pickling. This fruit is also preserved in common *mosaul-oil*; in this

instance, they are allowed to remain about a month in the vinegar pickle, before they are immersed in the oil. Many persons are very partial to the pickle thus made; but, in my humble opinion, nothing can be more rank; especially when the rinds are not pared off. *Mangoes* likewise make a very rich preserve, provided they are prepared before the stones are suffered to harden; else they will be very fibrous, and cut with peculiar harshness. With respect to the ripe fruit, it is impossible to describe the flavor; since, even on the same tree, various kinds will often be found. A stranger would conclude, on seeing *mangoes* of different colors, different scents, and different shapes, ripening on the same tree, that they had been grafted; but such is not the fact: there seems to be some very peculiar property, that causes it to shoot out with such different bearings, which remain on distinct boughs; as though the tree were composed of various twigs, all proceeding from the same stem. What can be said of a fruit varying in flavor, from the finest apricot, down to a very bad carrot? Such, however, is known to be common: it is true, that, for the most part, the whole crop of a tree will be pretty similar, both in shape, and flavor; but such is not always the case. As for the produce of trees resulting from the kernels of the same kind of *mango*, that is quite a lottery: for, like

potatoes raised from seed, there will generally be found a great variety.

The Chinese have produced considerable amelioration in *mangoes*, by a very simple process. They select some healthy branches on a good tree, and, having pricked the bark through with a sharp awl, surround the part with a lump of wet clay, or loam; which they secure by means of a piece of canvas, bound lightly with hempen bands. Above each part thus treated, a large pot of water is suspended, having in its bottom a small hole; which, being partially stopped with a piece of rag, allows the water to drip, whereby the clay is kept constantly moist. In about three months, small fibres shoot out through the punctured bark; which, on the branch being cut off, and the canvas being removed, strike into the soil, and become roots. It is highly curious, that the fruit produced by branches thus treated, becomes more fleshy, while the stone diminishes considerably; it being more flat, and rarely so firm as that of the common *mango*. By persevering in the operation, that is, by repeating it on the branches of a tree thus cultivated, for some generations, the kernel becomes so reduced as scarcely to be noticeable, while the skin also loses much of that highly acrid quality, arising from the abundance of turpentine it contains.

Mangoes are peculiarly stimulant, rarely fail-

ing to cause those who eat of them freely to break out with boils of considerable size, and often very tedious in their cure. It is absolutely necessary to treat these as critical abscesses; for, were any repellent to be applied, serious consequences would inevitably follow. Persons lately arrived in the country, often devour this luscious fruit, until checked either by a dozen or two of these most distressing companions, or, perhaps, in consequence of that kind of bowel-complaint prevalent in all hot climates, and which, though generally not very difficult to remedy when properly treated in its first stage, soon turns to dysentery, carrying off a large portion of those whose constitutions are not remarkably sound. When eaten in moderation, *mangoes* are gently aperient; but if, notwithstanding its acrid taste and effects, the rind should be incautiously swallowed, the stomach will be considerably disordered. The *gland*, or kernel, which in shape is something like a very large, flat, Windsor-bean, is unpleasant to the palate, its flavor being very similar to that of the acorn. Swine, especially of the wild tribes, which often take shelter, during the season, in *topes*, or forests, of wild *mangoes*, eat the entire fruit, as it falls from the trees, with great avidity, and thrive amazingly.

The generality of *mango-topes* owe their origin to religious institutions, or to bequests, or to

charitable donations. To plant one, it is necessary that the land should be purchased in fee-simple; when, the trees being set out, perhaps thirty feet, or more, asunder, in rows, so as to form regular square intervals, the whole are fenced by means of a deep ditch; from which the excavated soil is thrown inwards, and either planted with *baubool, (mimosa,)* or sown with that tall kind of grass which bears a very large tassel, and is known by the name of *surput*: of this grass notice has already been taken in describing the *seerky* used in thatching *bungalows*. Some *topes* are endowed with small sums for the purpose of maintaining a priest, for whom a *comfortable* residence, and a substantial *durgaw*, (or temple,) are erected. The sale of the fruit, (which generally proves a full crop in four or five years, the trees being then as large as a well-grown walnut-tree,) furnishes the means of sinking a well, cased with masonry. But it is more common for the person who causes the *tope* to be planted, to sink the well also; and to celebrate the marriage of the former with the latter, in a manner suitable to his rank or property. On such occasions, the well, being supposed to possess the fecundatory powers, is considered the husband; the *tope* being typified as feminine, by the fruit it produces. However much we may be disposed to smile at a custom generally attended with much ceremony, and ex-

pence, we cannot but admire its effects; which, in a tropical climate, are highly beneficial, both to the weary traveller, and to the thirsty soil. Hence, the sight of a *mango-tope* is generally attended with the most pleasing anticipations!

Although *mango-topes* abound in every part of the lower provinces, their wood, except in *bungalows*, is rarely employed in European architecture; nor do the natives make much use of it as a timber: large quantities are every year cut up for planks, intended chiefly for very ordinary purposes, where great strength and durability are not essentials. The immense quantities of fine bamboos, which ordinarily grow very straight to the height of sixty feet, or more, though rarely measuring more than five inches diameter near the root, and gradually tapering off as they ascend, supply the contented native with rafters, joists, posts, pillars, laths, and a great variety of et ceteras, all tending either to his shelter, or to his convenience. The ordinary price of these invaluable reeds (for they are of the *arundo* tribe) may be from three-pence to five-pence each; that is, generally from seven to twelve for a rupee, according to size and demand. Millions of them are annually brought to Calcutta, both by water, and on *hackeries*; in the former instance, they, being remarkably buoyant, are floated in clumps, or, perhaps,

are made into rafts, on which *boossah*, (or chaff,) and even corn, are laden; or they are tied to the sides of very large boats, which also carry from five hundred, to as many thousands, as a cargo. The buoyancy of the bamboo is occasioned as much by its various cells, as by the lightness of its wood. These cells, in a common sized bamboo, may be about three quarters of an inch in diameter in those joints that are near the roots; where the wood is far more solid and compact than in the upper parts, towards which the cells become gradually wider, and the joints longer; thus reducing the substance of the bamboo very considerably, as we find to be the case with reeds in general. This variety in the several parts affords considerable convenience, their allotment being made according as the work may require more or less substance; and, as the whole bamboo may be split, like whale-bone, from top to bottom, without much exertion, scope is afforded for applying it, with great promptness, to an infinite variety of purposes.

In their whole state, bamboos are used, not only for rafters in the construction of *bungalows*, but as yards for the sails of the common country craft; sometimes those of extraordinary size are selected for top-gallant studding-sail booms, in vessels not exceeding four or five hundred tons; their immense strength qualifying them

admirably for that situation. The smaller open boats, throughout the East, are generally fitted with bamboo masts, selected from the lower part of the reed, the upper being more suited, by its lightness, to be employed as yards: thus, for three-pence, a boat of about four or five tons may be furnished, from the same bamboo, with both mast and yard. In vessels of greater burthen, two or more, even up to a dozen, of bamboos, are lashed together around a stout piece of wood, which, passing through the thatch, fits into a step on the vessel's bottom, and is well secured by chocks and lashings in various places. This stick, which serves as the base of the mast, may be about fifteen feet long, and nine or ten inches diameter: it is commonly left in a very rough state, that the bamboos which are to surround it may be more firmly held in their places. In this manner the mast is run up, probably to the height of forty or fifty feet, according to the vessel's burthen, and at every two or three feet is bound by cords made of white hemp. The position of this awkward-looking pile is maintained by stays innumerable; many of which, being allowed to point forward, before the line of the mast's perpendicular, obstruct the bracing of the yard very considerably. The strength of that yard must be proportioned to the sail; sometimes one well-selected bamboo may suffice, but in vessels of great bulk, say from sixty to

ninety tons, two, or even three, stout bamboos are found requisite.

The sail is usually made of a very coarse kind of canvas, constructed of a very indifferent kind of hemp, generally used for rice bags, &c., and known by the name of *gunny*: each piece may measure six or seven feet by thirty inches; consequently, the innumerable joinings made in a large sail, offer a very ready means for the wind's escape. *Blacky* is not very particular in this respect; with him, a sail is a sail, so long as a bit remains adequate to giving the vessel way through still waters.

It will naturally be asked, 'Why is such miserable tackling in use?' The reasons are, *firstly*, because the native owner of a vessel will not go to one farthing expence beyond what may be indispensably necessary, however clumsy, or subject to mishap, to set his vessel afloat, and to have her, as he thinks, ready for departure. *Secondly*, the materials are probably of his own growth, or he deals in them, or, which is often the sole motive, he finds them, in the first instance, by far cheaper than more substantial materials; and, *thirdly*, even if other materials of a better quality, and in every instance more appropriate, were to be had for the same money, he would not very readily deviate from the customs of his ancestors. Were a vessel fitted up on European principles to be wrecked, the whole family

would impute the accident to the sin engendered by such adoption of the customs of a race held in abomination by even the lowest *caste*, (or sects,) throughout the country. Nevertheless, we sometimes see the *manjy* and *dandies* grievously put out of their way, by some shrewd native, who resolutely breaks through the general prejudice, and imitates that which his faculties convince him is founded upon science. Not that he will understand the how, and the wherefore; no; he sees the practice is good, and he adopts it: whereas, if any regulation were to be framed to enforce his compliance with our system, in that, or in any other particular, we should assuredly witness his receding, if possible, from every idea of improvement; or, if under the necessity of conforming, that his whole deportment would betray the reluctance, and antipathy, he felt on the occasion.

May not this trait in the character of Asiatics in general, serve as a hint to those who talk of coercing them to the adoption of Christianity? May it not shew that much may be done by *suaviter in modo*, provided we temper the *fortiter in re*?—Certainly!

Exclusive of the bamboo, the natives have an ample resource for rafters, as well as for posts and pillars, in the cocoa-nut tree, which grows, it may be said wild, throughout those parts within reach either of the sea-water, or of the sea-

hir. Not that it is absolutely confined to such situations; but, in proportion as those are removed, so does the natural growth of this tree gradually diminish; giving way to the *taul*, (or fan-leafed palm,) which, though less umbrageous, and, in many instances, less useful, attains a great height, and furnishes a much larger quantity of wood. In general, few *Bengallees* will cut down a *nereaul*, (or cocoa-nut tree,) which supplies them with so many requisites. Thus, the outer coating, which often weighs from one to two pounds, when stripped off longitudinally, furnishes those fibres called *coir*, whereof both small rigging and cables are made. This kind of rope is particularly elastic, and buoyant; floating on the surface of the sea, to any extent; therefore, when, owing to the strength of the current, a boat misses a ship, it is usual to veer out a quantity of *coir*; having previously fastened an oar, or a small cask, &c. to its end: by this device, the boat may be easily enabled to haul up to the ship's stern.

I should think, that, were a *coir* hawser kept on board every ship in the British marine, a great number of lives would be saved. It is, however, peculiar, that fresh water rots *coir* in a very short time; corroding it in a most unaccountable manner; whereas salt water absolutely invigorates; seeming to afford additional elasticity. This shews that *coir* is by no means fit

to be used in running rigging, nor as shroud-hawsers, &c., especially for vessels subject to approach low latitudes; it being easily snapped in frosty weather.

Nothing can equal the ease with which a ship rides at anchor when her cables are of *coir*; as the surges approach the bows, the vessel gradually recedes, in consequence of the cable yielding to their force; but, so soon as they have passed, it contracts again, drawing the vessel gently back to her first position. The lightness of the material doubtless adds to this pleasing effect; for the cable would float, were not the anchor sufficiently heavy to keep it perfectly down. It is to be remarked, that a hempen-cable always makes a curve *downwards*, between the vessel and the anchor, but a *coir* cable makes a curve *upwards*: therefore, if a right line were drawn from the hawse-hole, to the ring of the anchor, it would be something like the axis of a parabolic spindle; of which the cables would form the two elliptic segments, or nearly so.

A very considerable trade is carried on, from all parts of India, with the Maldivies, and Sechelles, (very numerous clusters of islands near the west coast of the peninsula,) for *coir* and *cowries*; the latter being used for inferior currency, while the former is greatly appreciated, on account of the fibres being much larger, and

firmer, than those grown upon the continent. Not only the islands above named, but all within the Indian seas, abound with the cocoa-nut tree; which, in many of them, stand absolutely in the water. These owe their origin to the growth of such nuts as, having been blown down, or dropped, when ripe, are buried in the sands; above which their acrospires soon appear, when the tree shoots up with greater vigor than its inland competitors. It is said, that, about a hundred and fifty years back, the *Sechelles* and *Maldivies* were known only as concealed sands, highly dangerous to the navigator; and that, after they had, by the action of the sea, accumulated so as to become superficial, a vessel laden with cocoa-nuts was wrecked upon one of these banks, which speedily threw up whole forests of that tree, in consequence of the seed thus furnished: others attribute the first supply to the adventitious floating of nuts from the Malabar coast. Nothing appears to discredit either of the accounts; but the former appears by far the most probable. Be it one way or the other, we now find that the islands in question not only produce immense forests of cocoas, but, that they are inhabited by a people, governed much in the same way as the other Arabian islands, (for such we may call these, as well as Johanna, Comora, Succotra, &c.:) and whose commercial relations may be said to consist of *coir* and *cowries*, bar-

tered with their neighbours of the peninsula, and the Arabs of Muscat, &c., for cotton-cloths, rice, sugar, &c. To whatever chance it may have been owing, the navigator now feels less anxiety when near these isles; for, notwithstanding they are so little elevated as to remain nearly in their former state of immersion, yet their cocoa forests, which generally tower to the height of thirty or forty feet, being visible at the distance of many miles, enable him to ascertain his locality with correctness, and to avoid the numerous shoals, by a due attention to the bearings and soundings. The natives are said to be extremely well acquainted with their archipelago, and to pilot vessels of great burthen with perfect security and precision.

The next consideration with the native, respecting the cocoa-nut, is its water, by us called cocoa-nut milk. This pleasant beverage is contained within the shell, and, in general, may amount to three quarters of a pint. It is purest when the nut is so young and tender as to allow the husk and shell to be cut with about as much facility as a stringy turnip; at which time, very little coagulum adheres to the interior of the shell, and that little is soft, like milk barely turned by rennet. Gradually, the water becomes rather turbid, and acquires a stronger taste; while the coagulum encreases to about the third, or even the half, of an inch in thick-

ness; hardening, and becoming tough, but easily snapped into pieces. When arrived at this state, it abounds in oil, which, at first, is rem rkably sweet, though of a peculiar flavor, and is much used by the native Portugueze, in lieu of *ghee*, in their culinary operations.

The mode of extracting the oil is very simple: a piece of wood, say two feet in length, six inches broad, and two or three thick, bears at one of its extremities a stem of iron, driven in by means of a spike; this stem must be stout, and should measure about ten inches; but, towards its summit, spreading into the form of an inverted crescent, somewhat concave, and deeply jagged at its circumference. Sitting, as usual, on the ground, the operator keeps the baton from tilting, by placing one of his feet firmly upon it: in that position he takes the nuts, commonly broken into two or more pieces, by a forcible stroke of some heavy implement, or by dashing them on the floor, and, by rasping the interior of each piece against the jagged edges of the iron, causes the coagulum to fall, in form of a coarse powder, into a vessel placed below to receive it. To effect this with more facility, the stem slants obliquely from the baton; allowing room for the receiver to be put immediately under the crescent. The raspings are now put into hot water, in which they are well stirred and pressed with a large wooden spoon;

by this means the oil is separated; it is drawn off by opening a little hole near its surface, as it floats upon the water. It is inconceivable how much oil is thus obtained in a few minutes; but, both from its own nature, and the mode of extraction, it soon becomes offensively rancid; a state in which it is by no means objectionable to the swarthy *Signors*, who, as well as the Hindus in general, are partial to it as an unguent for the hair. To a fresh European, the scent of this powerful finish to the charms of an Indian Venus is highly objectionable: of all the stinks of which India can boast, it certainly is the worst. But, as before observed, if used immediately after extraction, nothing can be sweeter: it also burns remarkably well; therefore is in general use for lamps among all the European inhabitants. The residuum, after separating the oil, fattens poultry better than grain: the pork of swine fed upon cocoa-nuts is delicious; as must be confessed by all who have visited the Andamans and Nicobars. Considering the coagulum as a food for mankind, I should by no means feel disposed to recommend it; though it is certain that the natives eat of it freely: experience satisfies me, that it is extremely difficult of digestion; and that, when ate as a meal, much inconvenience, if not indisposition, will generally follow. Nor can I recommend the water of the young nut to persons whose bowels are not of the strongest;

it being aperient, and, when used beyond a certain quantity, extremely apt to induce dysentery: the amount of a nut-ful may, perhaps, be drank with perfect safety. During very hot weather, if the nuts are fresh gathered, or suffered to remain for a while in cold water, it is not very easy to withstand the temptation.

The shell of the cocoa-nut is always most valuable when suffered to ripen upon the tree; it then acquires great hardness, and a fine dark chocolate color, interveined by fine lines of a rich dun, or clay, or perhaps striated with those tints: they then take a good polish, and may, when tastefully mounted, be considered as ornamental to the sideboard. But, it is to be observed, that they are rather a brittle ware, compared with their solid appearance; and, that it requires a great length of time to divest them wholly of a certain strong scent, reminding those who have been accustomed to the oil, of that peculiar and powerful rancidity it invariably acquires by long keeping, and especially by exposure to the air.

Previous to the introduction of lamps in the halls, passages, &c., in the houses of Europeans, cocoa-nut oil was to be had for about three-pence, or four-pence, per *seer* (*i. e.* the measurement of a *seer*, which comes very nearly to the English quart; in some places exceeding it, but in others falling short). Since that practice

has obtained, in consequence of candles having been doubled in price, the oil has likewise been enhanced; so that it now sells at about three and a half, or four *seers* per rupee; which accords with seven-pence halfpenny of our currency per quart. No kind of animal oil is in use among the natives of India, either as food, or in manufactories; if, indeed, we except that most curious production, the *meemii-ke-tale*, or oil extracted from the bodies of malefactors; who, being well fed for a month, or more, previous to execution, for the purpose of encreasing their fat, have large fires lighted under them while on the gibbet, and metal vessels placed to receive the drippings. That this practice has heretofore obtained, under the government of the native princes, does not, I believe, admit of a doubt; but, that it is now obsolete, is equally certain. Still *meemii-ke-tale* (*i. e.* human oil) may be had at many places; though not genuine, but composed of whatever materials may form a mass resembling that originally in use. I have seen several of these masses, which were of a dark, opaque brown, appearing something like coagulated blood mixed with dirty jelly, and become hard by exposure to the sun, or by inspissation: its smell was intolerably offensive. On the whole, this celebrated extract, which is supposed to cure all contractions, and stiffness of the joints, is a subject of astonishment, when

we consider it to be in use among a people so very peculiar in their tenets, and professing so much humanity, not only towards their brethren, but towards all animated nature. Had Shakespeare been acquainted with the existence of the *meemii*, he certainly would have given it a place in Hecate's stir-about!

If the natives were intent upon obtaining animal oils, the greatest abundance could be commanded; porpoises, turtles, alligators, dog-fishes, and sharks, all of which contain large quantities, exist in every part where the water is brackish; some of them, indeed, become even more numerous as their distance from the sea encreases. Whales, likewise, are occasionally seen in the Indian Sea, and in the Mozambique Channel are extremely common. But, to persons habituated from their infancy to the use of high-savored viands, any sweet oil would be insipid: such people want a *haut-goût* in their sauces; yet it must be confessed, they certainly manage to render even their strongest preparations extremely palatable; but, to relish them properly, the culinary operations must not always be witnessed. *Babachees*, or cooks, in the employ of Europeans, are sometimes extremely filthy; far more so than when dressing their own victuals. Few of the natives are sparing in the use of water on such occasions, even though it should be brought from some distance:

yet, it is equally true, that whole villages are sometimes content to use water from a pool, comparable only with that into which Ariel ushered the surly Caliban.

The trunk of the cocoa-nut tree not only answers, when the central pith is scooped out, for canoes, but, when split, as it may easily be into slips of any width, forms excellent rafters: if applied to that purpose, all the soft part is taken entirely away, leaving only the exterior case, which is very hard, tough, and elastic, about three inches in thickness. A trunk of about a foot in diameter will commonly rive into five staves, each about seven inches wide: such should be placed edgeways on the walls, that their scantlings may be in a proper direction. Rafters thus made, provided they be not more than twenty feet, or thereabouts, in length, and not too heavily laden, will stand for generations, without shewing the smallest symptom of decay. In saying this, I am to be understood as alluding to their being under cover; otherwise, they will not exhibit such durability, although they may fully claim to be on a par with most of the indigenous timbers.

The reader is to understand, that, excepting where merely temporary, that is to say, intended for a few weeks, or months, *bungalows* are always built with pavilion thatches; by which construction they resist the weather far better, while

the quantity of brick-work is considerably less than where gables are run up. The proximity of the thatches in the *veranda* parts, renders them far less cool, in the hot months, than the interior, in which the thatch is so much further removed: the latter would be rendered much cooler were flues, or ventilators, to be made for the purpose of carrying off the rarefied air, as already suggested. Cocoa-nuts are often sawed into two equal parts, for the purpose of being made into ladles: to effect this, a hole is made on each side, about half an inch from the edge, and a stick is passed through, serving as a handle; much the same as we see in the *jets* used by brewers for taking liquor out of their vats. When sawed into two equal parts, across the grain of the *coir* coating, cocoa-nuts make excellent table brushes, causing the planks to assume a very high polish from their friction. As this operation requires some strength, it is proper to be careful that the edges of the shell, if left in, (as is sometimes, though improperly, done,) should be perfectly smooth; being once rendered so, they will never scratch, however forcibly the brush may be applied. A very good mode is, to strip off the *coir*, and, after soaking it well in water, to beat it with a heavy wooden mall until the pieces become a little pliant, when they should be firmly bound together with an iron ring; their ends being then levelled, the

implement is fit for use. A little bees'-wax rubbed occasionally upon them, adds greatly to the lustre of the furniture, without being clammy.

The stem of the toddy-tree is very similar to that of the cocoa, but grows to a much greater height, and is put to the same purposes. On first seeing a grove of toddy-palms, one would suppose that a strong wind must inevitably tear up the whole by their roots; which consist of innumerable small fibres, that penetrate but a very little way, comparatively, into the soil. When one of these trees is laid prostrate by the wind, a very small cavity is made, rarely so much as a cubic yard. The leaves differ very widely from those of the cocoa: the former being rather spear-shaped, about a foot, or more, in length, by perhaps two inches at their broadest part, and attached to each side of the rib, which may be from ten to fourteen feet in length, and hang gracefully on every side of the trunk; covering the nuts, which grow on very short, stiff stems, close under the place where the leaves start from it in all directions; a tuft of similar, but smaller, branches, grow with rather a vertical tendency.

The *toddy-palm* has, on the contrary, about ten or a dozen large leaves, radiated from their stems, arranged in folds very similar to a lady's fan half spread; but the outer edges are indented considerably: the leaves form each about three-

fourths of a circle, but not very regularly so; some more, some less. These are made into *punkahs*, or fans, of various sizes; or, when torn into strips of about two inches wide, which may be about the medium breadth of each fold, serve the natives in lieu of paper. The greater part of the accounts kept by Bengallees are written on these leaves, by means of any sharp-pointed instrument, which, marking through the glossy rind, or coating, on either side of the leaf, remains, ever after, perfectly distinct and legible. Those who wish to have the letters still more so, rub the leaves, after filled with writings, with *kaujool*, or lamp-black; which sinks into the porous parts laid open by the instrument, but easily wipes off from that portion of the surface which has not been pierced. Some hundreds of these leaves may be seen, secured together at one end by a twine passed through each, like waste paper in a grocer's shop; thus forming a voluminous collection. The fruit of the *taul* consists of two, or sometimes three, *lobes*, or pods, somewhat similar to those in a horse-chesnut, and, like them, concealed in a pithy, spherical coating, but with a smooth exterior. Each *lobe* is hollow, and contains a small quantity of very clear liquor, partaking, in a very slight degree, of the flavor of rose-water; the *lobes* themselves are about the size of a Chelsea-bun, are rather of a crisp, but gelatinous sub-

stance, and pleasant to the palate: their exterior is covered with a very thin brown rind, like that of an almond; rather astringent, but by no means acrid.

The liquor, called *toddy*, is obtained by making an incision under the head of the tree, when, a thin wedge being introduced, the *toddy* will gradually exude into a vessel suspended to receive it. This liquor is very pleasing when fresh drawn, but, in a few hours, acquires a harsh flavor, ferments, and becomes highly intoxicating. It answers admirably as leaven, making very light dough; but if kept, as is too commonly done, until rather sub-acid, it communicates a most unpleasant tartness to the bread. Groves of *toddy-trees*, in some parts of the country, yield a very handsome revenue, and great profit to the renters. Like the cocoa-nut tree, they have within their summits a substance very like a cabbage in flavor: this occasions mariners sometimes to fell them, with the view of carrying that part to sea; where it will, if left within its rind, keep for many months. I have tasted of this vegetable, but did not feel much gratified, though it assuredly was not disagreeable: it seemed to require much boiling.

The stem of the *toddy-palm* is annulated, but not very deeply: of this the *toddy*-men take advantage, ascending to the summit, and descending again to the plain, with wondrous

agility. This is effected by a piece of strong twine, about a yard in length, but doubled into a loop of that extent. The great toes are respectively put into the ends of the loop, so as to keep it perfectly extended. The man first embraces the tree, as high as he can reach, for the purpose of raising himself from the ground; his feet being instantly carried, on opposite sides of the trunk, as far asunder as the loop may admit. Then, sustaining himself by means of the loop, he slides his arms upwards to take a second spring; following, in due time, by the removal of his feet, as much higher as he has been able to reach. In this manner, successively stretching up his arms, and swarming with his feet, he reaches the summit; where, while he either suspends the pot, or releases it, his weight generally rests on the loop. The great art, both in ascending, and descending, is to keep the loop always stretched: should it be allowed to slacken, in all probability it would fall off. Few persons, following this profession, require more than half a minute to mount the highest *palmira*; by which name the *toddy-palm* is most generally known to Europeans. The natives designate it the *taul* (or *taul-gautch*).

I believe very few kinds of wood, except those I have mentioned, ever come within the ordinary course of domestic architecture; though,

in some few situations the *soondry* and *jarrool* are employed for [illegible] purposes; but, with some reserve on [illegible]rt of the natives, who hold them to be more applicable to the construction of small craft, and to the formation of carriages of various descriptions. The *soondry* is a remarkably tough, heavy, and elastic wood; while the *jarrool*, though rather harder, more resembles the beech, than any other of our indigenous timber trees: as a material in boat-building, it ranks next to the *teak*, hence, many of the *donies*, (or coasting vessels,) measuring from fifty, to a hundred and fifty, tons, are principally built therewith. When *teak* is scarce, we occasionally see the ship-wrights apply *jarrool* in their repairs of the upper works of large vessels.

Having said thus much of the manner in which houses, and *bungalows*, are constructed, I have only to observe, that, of late years, the European architects have been rather prone to sacrifice comfort to appearance. Those old houses built at a time when *punkahs*, *tatties*, glass-sashes, &c., were not in use, certainly evince that attention was paid to coolness, but without disregarding convenience. Now, although building is full fifty per cent. cheaper than it was thirty years ago, we see the walls much less substantial, and, on the whole, a want of local fitness in the arrangement of the

several apartments. I must caution the reader, that what would appear an admirable plan for a residence in our climate, would be found totally inconsistent with the temperatures attendant upon the changes of season in India, and with the several practices, and operations, peremptorily necessary towards meeting those changes. It must never be forgotten, that, at some seasons, and at some hours in all seasons, every door and window is usually thrown open; likewise, that, during the continuance of the hot winds, such apartments as cannot be kept moderately cool, by *tatties* applied to some apertures on that floor, whence the current of refrigerated air may find admission, will be scarcely habitable, and, at night in particular, will glow like ovens.

The hot-wind commonly rises with the sun, blowing at first very gently, but encreasing gradually, until about one or two o'clock; after which, it subsides into a perfect calm. This is its ordinary course, but some days remain calm throughout, while, at other times, the wind blows a hurricane the whole night through. I have, indeed, known it to continue, with very little change of temperature, or variation of force, for full ten days; during which period, the nights were, if any thing, hotter than the days; so that extra *b'heesties* were retained to water the *tatties* during the night. That was, to be sure, a very singular season, carrying with it a prodi-

gious mortality; great numbers dying suddenly. It was peculiar that the fit, which resembled apoplexy, attacked all ages alike, and paid no deference to the abstemious and temperate, any more than to the licentious and gormandizing classes.

In describing the habitations of the lower orders of natives, I explained, that their chief attention was paid to privacy, and to the exclusion of the glare. The superior ranks are not less intent upon the same objects; though many of their state apartments do not indicate, that either the one or the other were of the smallest consideration. Some of the *Durburs* are uncommonly exposed; and, in consequence of the crowd, the fastidious ceremony observed, and the constant succession of entrances and exits, form a most uncomfortable *tout ensemble*. Yet, it appears that the natives have made little or no variation in their system, not only within the time we have been acquainted with them, but, if we examine their ancient structures, not for centuries before a British foot was placed upon their soil. We ordinarily find nearly the same aspect given to all their buildings, especially to their places of worship: *nimauzes*, (or open temples,) where the Mussulmans are in the habit of offering up their prayers, invariably are made to front the west; under the idea of their facing the shrine of Mahomed. This error may

be considered on a par with the placing of altars in our churches always at the east end, with the view to their standing towards the place of our Saviour's nativity: we also inter our dead with their heads to the west, on the same account.

Having detailed what relates to the domestic habits, and to the architecture of the country, I shall now proceed to describe the manner of living among Europeans in India; observing, that there are two very distinct classes, though perfectly on a footing; namely, the residents of Calcutta, and those among the civil and military, who are subject to be detached from the Presidency. Formerly, only such gentlemen as held offices of considerable emolument, or those who were married, supported a regular table: such might be said to keep open-house; at least, far the greater number usually laid several spare covers, especially at supper-time, under the hope of seeing their friends drop in to partake of whatever might be in preparation. The dinner hour being known, (for almost every family then dined between two and three o'clock,) it was rarely needful to make enquiries respecting the proper moment for repairing to the hospitable board. Little or no ceremony was required; the host being as much pleased with the compliment paid by the visit of a young friend, as the latter was to find a welcome among the most opulent

and respectable portion of the European community.

Nor did the benefit accruing to the latter, confine itself within the limits of economical saving: it was generally found, that such as became habitually inmates of this description, were recommended to the notice of Government, or to such situations, (if not in the Company's service,) as afforded the immediate means of maintenance, or eventually led to lucrative speculations. A variety of instances could be adduced, of young gentlemen having, from the foregoing admission within the domestic circle of visitants, been rescued from that most unpleasant situation, namely, a want of respectable friends; these, as Shakespeare properly remarks, 'had greatness thrust upon them.' Such *was* the state of society when I first arrived in India, [1778] and such *was* the fair expectation, with which not only young gentlemen, but many 'far advanced upon time's list,' landed on the shores of the Ganges. In fact, it required that some very substantial objection should personally exist, to deprive any individual of an implied right to the most friendly reception. Still, however, it must be acknowledged, that a certain distinction, rather too fastidious, was prevalent in favor of those who came with appointments to the Company's service: especially in the civil

line. To a certain extent, such might have been considered reasonable, when we reflect that future association in the same duties was to be expected; but, the matter was doubtless carried too far; it being distinguished by that kind of deference which stamps a superior value upon its object, the whole amount of which is deducted from the supposed inferior; thus, causing the former to preponderate in society in a multiplied ratio, in the same manner as taking from one scale to put into the other, occasions the difference to encrease in the proportion of three to one.

The gradual encrease of commercial transactions, and of intercourse, with several parts of that extensive territory, which ultimately has come under the influence, if not the control, of the British government, served as invitations to many adventurers, who quitted Europe under assurances of employ in the East. Their expectations were generally confirmed by permanent establishments in various parts of the country; whereby a complete change took place, as to the estimation in which free-merchants, as they are generally termed, were held.

Among this class, there have, within a few years, appeared numbers, whose industry, and extensive concerns, rendered them conspicuous; and it would not, perhaps, be too bold to predict, that, in the course of a few years, the

success of their efforts may prove a stimulus to such an encrease of private traders, as cannot fail to give birth to events of great national importance.

It would not be in place to notice such probable results in this work, but it may be permitted, without trespassing the bounds I have marked out to myself, to anticipate, that the commercial society of India will, in time, grow out of the knowledge of such as surveyed its state some thirty years ago. We have, at the same time, to lament, that, owing to such an augmentation of all ranks, it has been found necessary to drop many customs suited only to a limitted society, and to adopt a certain reserve, which may not be exactly conformable to those very sanguine ideas entertained by persons who may have read of the ancient regime of Oriental hospitality; the declination of which has unavoidably kept pace with the additional imports consequent to extended commerce. There will, however, even at this day, be found much to approve; and the mind endued with sensibility will have to acknowledge many a civility, very nearly akin to kindness, and sufficiently poignant to give an ample scope for many a grateful acknowledgment.

Morning visits are not, generally speaking, so uncommon as they were: formerly, few went to pay visits of ceremony during the forenoon; for,

the dinner-hour being early, there was little time for such unsocial compliments; whereas, now, that it is generally delayed until about sun-set, that is to say, to perhaps five, or six, or even to seven o'clock, the forenoon is more applicable to the reception of visitors; who, if on any terms of intimacy, do not hesitate to join the family at a little *avant-diner* commonly called a *tiffing*, and known among us by the name of *lunch.* This kind of refreshment (for it is not considered a repast) usually takes place between one and two o'clock, and consists of grilled fowls, mutton chops, cold meats, and sometimes of *curry* and rice. Being conducted without ceremony, and in a very desultory style, the dropping in of friends never occasions the slightest discontinuance, any more than the accidental arrival among an English party here, of an intimate, while partaking of a slice of cake and a glass of wine. The various formalities are, however, now transferred from P. M. to A. M. and it is usual to see the town of Calcutta thronged with *palanquins* during the whole of what is called the forenoon; but which commonly is made to extend to three o'clock; about which time, especially during nine months in the year, most persons are at home, divested of their usual dresses, and reclining, in some cool apartment, on a bed, or a couch, for the purpose of repose, and to prepare for that change of linen, and for those ablutions, not

forgetting the bath, which are both comfortable, and essential, in so very sultry a climate.

Gentlemen who purpose visiting the ladies, commonly repair to their houses between eight and nine o'clock in the evening; ordinarily under the expectation of being invited to stay and sup: an invitation that is rarely declined.

Among ladies who are intimately acquainted, morning visits are common, but all who wish to preserve etiquette, or merely return the compliment by way of keeping up a distant acquaintance, confine them to the evening; when, attended by one or more gentlemen, they proceed, in their *palanquins*, on a tour devoted entirely to this cold exchange of what is called civility.

Among the several justly-exploded ceremonies, we may reckon that, which existed until within the last twenty years, of 'SITTING UP,' as it was called: we must, at the same time, do the ci-devant inhabitants of Calcutta the justice to remark, that the practice was evidently founded on good-will and hospitality; although it bore so strong a resemblance to the exhibition of a cargo of slaves, as to occasion many a caricature, and many a satirical expenditure of ink. This 'SITTING UP,' as it was termed, generally took place at the house of some lady of rank, or fortune, who, for three successive nights, threw open her mansion towards the evening, for the purpose of receiving all, both ladies and gentlemen, who

chose to pay their respects to such ladies as might have recently arrived in the country. The fair damsels were thus at once introduced to the whole settlement, and not unfrequently obtained a variety of offers from men of the first consequence. Many matches have, indeed, been concluded even before the third night of exhibition. If we consider the fatigue attendant upon the return of these numerous visits, (for the slightest omission would have been an unpardonable offence,) and that the novelty of riding in a *boçhah*, (or chair-*palanquin*,) would not be agreeable to all, we may form some idea of what many a delicate female, melting with the heat, tight-laced, and tormented with musquito-bites, must have undergone during the performance of this ceremony. To the gentlemen of the settlement, it might have been abundantly pleasing; they had nothing to do but to post about in their *palanquins* from one sitting up to another, and there either to admire, or to quiz, the fair sufferers, according as their taste, or caprice, might dictate. The throng has, in some *lovely* instances, been so very great, that even a fourth night has been required for the benefit of bachelors from the interior!

The great encrease, not only of inhabitants, but of houses, some of which are situated at an inconvenient distance, has rendered the custom of 'sitting up' nearly obsolete. The modern

instances of its continuance, are, indeed, so very few, and those few so modified, as barely to leave room for saying that it is at all in use. In these days, a lady is received on landing by her friends, who, generally, after a few days of repose, and of preparation, invite their acquaintances, to be introduced to their fair companion, who, in the course of a week, usually returns their visits. This is merely a partial shew, compared with what formerly took place, and is no more than would be practised in England on a similar occasion: it is true, that, where superlative attractions exist, many, who probably are not in the habit of visiting the family, will often avail themselves of the opportunity to *chaperon* some acquaintance, merely with the intention of gaining a peep at the goddess.

The company rarely sit long at table after dinner, unless among those convivial souls who deem the presence of a petticoat a perfect nuisance. Such were formerly very numerous, but of late, the society of the sex has been more duly appreciated, and we see the gentlemen quitting the bottle to retire to the *chabootah*, (or terrace,) there to enjoy the cool air of the evening, and to take a cup of tea, or to smoke their *hookahs*; after which, those who have business to attend, proceed to their offices, &c., while the larger portion separate to partake of a family supper with some of their female acquaintances.

Very little ceremony is used on such occasions; the gentlemen leaving their hats in their *palanquins*, and ordering their servants to proceed, as a matter of course, to the houses whither their *palanquins* are to be conveyed. In many instances, these evening visits are paid in a very airy manner: coats being often dispensed with; the gentlemen wearing only an upper and an under waistcoat, both of white linen, and the former having sleeves. Such would appear an extraordinary freedom, were it not established by custom; though, it generally happens, that gentlemen newly arrived from Europe, especially the officers of his Majesty's regiments, wear their coats, and prefer undergoing a kind of warm bath of the most distressing description, both to themselves, and to their neighbours; but, in the course of time, they fall in with the local usages, and, though they may enter the room in that cumbrous habit, rarely fail to divest themselves of it, so soon as the first ceremonies are over, in favor of an upper waistcoat, which a servant has in readiness.

Supper, though enumerated among the ordinary meals of a family residing at the Presidency, seems rather to be the means of concentrating the party, than partaken of with that keenness we often witness in our colder climate. Few do more than take a glass or two of wine, generally Claret, with, perhaps, a crust, and a morsel of

cheese: the appetite at this hour, say ten, being by no means keen. After supper, the *hookah* is again produced, and, after sitting a-while in conversation, the lady of the house retires: few remain long after that has taken place. On the whole, it may be said, that at least four in five are in bed before twelve; or, perhaps, before eleven o'clock. From this, I exempt all concerned in card-parties, especially if the stakes run high: for such, no measure, or calculation, exists; the whole night being occasionally passed at tradrille, which is the favorite game, or at whist, &c. Such exceptions fortunately are not very numerous; it would certainly be difficult to find any city, wherein celibacy among the males is so prevalent, as at Calcutta, that can boast of so few excesses of any description. The European inhabitants of respectability certainly live well; that is, they keep as good tables as the seasons may enable them to furnish; and they drink none but the best of wines: Claret, Madeira, and Port, are in general use.

Of the former, there are two kinds; one called 'English Claret,' which is the best wine that France produces, manufactured after its arrival in England, with an addition of Brandy, &c., to enable its standing the hot climate of India, and with other liquids, to give it a richer body. Such wine generally sells at Cal-

cutta for about thirty rupees per dozen, equal to six shillings and threepence per bottle.

The other kind of Claret, which is the purest that can be obtained from the most valuable vineyards near Bourdeaux, the Coté-Roti, Chateau Margeau, &c., can rarely be obtained, except in times of peace, when sixteen rupees per dozen, equal to about three shillings and four-pence per bottle, may be considered a fair price. This wine, however well packed, and carefully treated, will not keep long: at the end of six or seven months after arrival, it will be found rather sharp, and then becomes extremely pernicious to the bowels. When fresh, it is remarkably fine, and delicate, and being far lighter than the 'English Claret,' is certainly best adapted to the climate. Occasionally, a few chests of Claret are imported at Serampore, a Danish settlement, about sixteen miles above Calcutta, but experience has proved, that, in regard to wholesomeness, as well as to flavor, it is far inferior to either of the former: the severe bowel-complaints its free use often occasions, are attributed to the litharge with which it is said to be fined; hence, what is called 'Danish Claret' is rarely found at any gentleman's table.

About thirty years back, a large quantity of

Madeira used to be imported at Calcutta, by the Company, in pipes of extra-measurement, for the use of their servants. Sometimes nearly a thousand pipes arrived during the course of the season; being of prime quality, and laid in by the Company's agents at Fonchall, it always sold well at the annual auctions: six hundred rupees was a common average. For some time past, the Company have, generally speaking, declined this trade, which was of extensive convenience to the residents at Bengal, and must be supposed to have paid them amply for their outward tonnage, while the returning tonnage was always at liberty to receive investments for the Europe market. The cause of this relinquishment has been attributed to various circumstances; but, I believe, is to be found in that immense supply which, at the close of the war in 1782, glutted the markets for some seasons. Until that date, the Company had nearly monopolized the trade, there being no competitors of consequence, though the speculation was open to all; but its excellence, which seemed to offer full seventy pounds for every pipe, that cost perhaps only twenty-five, or thirty, on the Island of Madeira, induced the French, Portugueze, and some English speculators, to embark on vessels under Imperial colors, and to become rivals in a trade which

could not bear extension beyond certain narrow limits. All could not be supplied at Fonchall; therefore Teneriffe, and other inferior wines, were substituted; whereby the depreciation even of the best genuine Madeira was enhanced, and it fell, in consequence, full fifty per cent. Of late years, very little of the latter has found its way to India; the produce of the island being almost wholly required for the Europe market; but the merchants in that quarter have found out the way to *doctor* the inferior wines of the neighbouring isles, so as to sell them at a good price, under the captivating titles of 'London Particular,' 'London Choice *Particular* Particular,' &c. &c.

The low price to which Madeira fell, (for, in 1781-2 it had been so high as two thousand rupees per pipe,) made a great change in the affairs of some adventurers, who had anticipated the golden harvest with which they were to return to Europe. The general effects were highly beneficial, as the greater portion of persons settled in Calcutta, &c., were enabled to purchase large quantities; which, being kept in *godowns*, (warehouses and cellars,) gradually improved in that hot climate, and, after a few years, became highly valuable. Many gentlemen availed themselves of the low state of the markets to supply themselves abundantly; some purchased from forty to sixty pipes, and thus secured to them-

selves a supply of capital wine, for many years consumption, at a certain price.

It is no uncommon thing to see Madeira, which has been in a gentleman's *godown* ten years in the wood: many have much older wine in their possession; a few can, indeed, boast of some, which, though inconceivably mild, and rich in flavor, is extremely potent. None will attempt to produce, at their tables, Madeira that has not been two or three years in the country; for the new wine is neither pleasant nor wholesome, and may be readily distinguished from the old, notwithstanding some venders are well skilled in the art of adding, in the course of a few *hours*, many *years* of age to the liquor. Among the military, it is found best to purchase wine that is known to be of good quality, and of a certain age; which is easily done, through the several agency-houses; all of which have generally large quantities, of every description, either on commission, or at command. This mode is far preferable to the otherwise general practice of buying several pipes, with a view to filling up the ullage, (say of four, from a fifth,) as the contents decrease. By such management, any person settled at Calcutta, or elsewhere, may, in the course of five or six years, become possessed of a stock of excellent Madeira; observing, however, that, in that time, every fifth pipe will have been drawn off, to fill up its

neighbours: therefore, in computing the value of such remaining pipes, that of the pipe thus expended must be included.

Nothing can injure a cargo of Madeira more than the presence of a cask of coal-tar: it communicates to the wine a most nauseous flavor, and scent; rendering it totally unfit for use. I recollect, about seventeen years ago, dining with a General Officer, who had inadvertently allowed his Madeira pipes to be smeared with coal-tar, for the purpose of preserving them. Whether it had that effect on the wood I never took the trouble to enquire, but it certainly *preserved the wine*; which, I doubt not, may be in existence to this day; for it was really too potent, even for parasitical stomachs!

The price of good Madeira wine that has been three or four years in the country, may be generally stated at about four hundred rupees, equal to £50. The pipes are not so large as formerly, but will commonly run about forty dozens; which brings the price per dozen nearly to twenty-five shillings, or little more than two shillings per bottle. Wine of the first quality may be about fifty, or even sixty, per cent. dearer.

The Port-wine used in India is generally of a light kind, not unlike what we term 'Southampton Port:' about ten years ago, when Claret began to be scarce, a large quantity was sent

out, and was bought up with readiness; but, on account of its astringent, and, consequently, heating, quality, it fell into disrepute. It is, nevertheless, highly esteemed as a restorative, especially in a convalescent state after obstinate bowel-complaints; and in cases of debility not proceeding from obstructions.

Such exceptions are, indeed, rare; for, I believe, very few of the local diseases are exempted from such connections with obstruction: in fact, almost every ague, which is a very common complaint in many parts of the country, and is generally designated the 'Hill,' or 'the Jungle-fever,' according to the situation in which it is engendered, either originates from, or resolves into, confirmed hepatitis.

Porter, pale-ale, and table-beer of great strength, are often drank after meals: all these are found in the utmost perfection, for indifferent malt-liquors do not stand the voyage; and, even should they arrive in a sound state, would meet no sale. A temporary beverage, suited to the very hot weather, and called 'country-beer,' is in rather general use, though water, artificially cooled, is commonly drank during the repasts: in truth, nothing can be more gratifying at such a time, but especially after eating *curry*. Country-beer is made of about one-fifth part porter, or beer, with a wine glass full of *toddy*, (or *palm-wine*, which is the general substitute for yeast,) a

small quantity of brown sugar, and a little grated ginger, or the dried peel of Seville oranges, or of limes; which are a small kind of lemon, abounding in citric acid, and to be had very cheap.

The great cheapness and abundance of the materials, added to the frequent and great thirst to which Europeans are subject while resident in India, should appear to be strong inducements toward the free use of punch, lemonade, sangaree, negus, &c. The reverse is the case; for, I believe, with the exception of the lowest classes, all such beverages are totally discarded: they are deleterious; rarely failing, in the first instance, to injure, and ultimately disgracing all who yield to the temptation. Fortunately, that temptation is not very strong; as liquors of a superior quality are found to be more wholesome, more pleasant, and, in the long run, not much dearer. Besides, there is a certain odium attaches in that quarter to all who are in the habit of drinking spirits, whether raw or diluted. In a climate so ungenial to European constitutions, and where, as above said, thirst is often very distressing, the frequent recourse to '*brandy shrob pauny*' (brandy and water) never fails to produce that sottishness at all times despicable, but peculiarly unsuited to Oriental society, in which at least the better half are men of very liberal education, and all are gentlemen.

In saying thus much, I barely do justice to

the persons of whom mention is made; for it may be said, without fear of refutation, that fewer deviations from propriety are to be found in our Indian settlements, than in one-tenth the number of inhabitants of the same classes in any other country, whose manners and properties, either personal observation, or respectable authors, have enabled me to estimate.

This results, not simply from the advantage almost every individual in the Company's service, and in the mercantile branches, possesses, of having been brought up in the most respectable seminaries, &c., and of being early initiated in the walks of decorum and integrity among their respective friends in Europe; it proceeds partially from the nature of the climate, and from that mode of association which the duties attendant upon each profession, as well as certain localities, seem, imperiously indeed, to inculcate.

I have before shewn that taverns, punch-houses, &c., are by no means places of resort, as in Europe: there is no such thing as a coffee-room, merely as such; unless we so consider the few mansions of certain French and English *traiteurs* and *restaurateurs*, who occasionally have to accommodate committees of shipping, or town meetings, &c., and who send out dinners to any part of the town, or its vicinity, on terms advantageous to both parties. Therefore, under

such exceptions, which are rare, and setting apart the *civic* operations of the beef-steak clubs, &c., it may properly be said, that coffee-house association is unknown in Calcutta, at least among the respectable members of the community. Neither does any corps in the Company's service keep a mess: all the officers dine either at home, or in small parties, according as their several fancies, or occasion, may lead them. It is common to hear one or two of a party, before they retire from table, which is always done without the least ceremony, enquire, who will dine with them the next day? Thus, it is extremely easy to avoid any obnoxious person, be the objection to him what it may; and as the omission of any individual, from the ordinary course of invitations of such a description, soon produces explanation, it is impossible that a person of unpleasant manners, or of an indifferent character, can, for any length of time, stand his ground; the whole circle, by degrees, drop his acquaintance, while, in lieu of that friendly and familiar salutation which denotes approbation, the shunned offender experiences the most distant, and most forbidding reserve. Being once condemned, something more than ordinary must appear to produce his re-admission: for the most part, especially if habitual inebriation be in question, the unhappy man pursues his career, either until the grave may

receive his dropsical remains, or the Invalid Establishment affords him an asylum against the mortifying neglect of his late associates.

This kind of retirement, of course, can only apply to military characters, and certainly does infinite credit to the humanity of those who tolerate the measure. It may, probably, be urged, that such an institution should not be open to persons retiring merely in consequence of indulgence in depravity; or because they are no longer acceptable among their former associates: it may be asserted, that the admission of such men within so honorable a pale, must be injurious both to the character of the corps, and to the feeling of those meritorious individuals who are compelled by wounds, &c., to accept the benefits of that establishment. This is undeniable; but when we consider, that, perhaps, after long service in an oppressive climate, the best of us may be brought to that kind of conduct which disqualifies from military service, it may not be too much to assert, that the concession and indulgence thus granted, are at least charitable, and often incontrovertibly merited.

Among the gentlemen of the civil service, the society is far less diversified than with us in Europe; therefore, much facility is afforded towards the evasion of intercourse with persons in any way unacceptable. It must at the same time be remarked, that, in this instance, the most

liberal consideration is very generally exhibited; and, that so long as any hope of reform may remain, there will rarely be found a disposition to exile a man from that converse with his countrymen, without which he can neither preserve the appearance of respectability among the natives, nor, in all probability, receive the approbation of Government. Hence, what we commonly call a 'black-sheep,' is a most marked, and equally forlorn character, throughout the East; and, consequently, is very scarce.

Many years ago, when it was customary for the Governor-General, and some of the leading gentlemen, such as the Members of Council, &c., to have public breakfasts weekly, persons of all characters mixed promiscuously at table; good and bad were to be seen around the same tea-pot. This occasioned a native of some consequence to remark, that, 'among Europeans, all who wore a hat and breeches were gentlemen.' The sarcasm was not, however, quite applicable; for, the breakfast being considered merely the preface to a levee, it was to be expected that, on such occasions, persons of every description would be seen, who, having public business to transact at the levee, naturally availed themselves of the opportunity, without reference to the opinions of others regarding their private conduct. After the arrival of Marquis Cornwallis, these public breakfasts were discontinued, and

open levees substituted. This was certainly pleasanter for both the Governor and the governed. However, there are, to this day, I believe, some remains of the former ceremony preserved, among a few of the principal gentry; who, on certain days, expect to see their friends, and such others as may wish to consult them. Some have two levees, if we may so designate them, weekly; one for Europeans, and one for natives; but such cannot be considered official.

A breakfast in India bears a strong resemblance to the same meal in Scotland, with the exception of whiskey; the introduction of which, (if to be had,) or of any other spirits, would be considered both nauseous and vulgar. The general bill of fare, at this time, consists of tea, coffee, toast, bread, butter, eggs, rice, salt-fish, *kitchery*, (a kind of olio,) various sweetmeats prepared in the country, especially preserved ginger, and orange marmalade, honey, &c.; and, after hunting or shooting, occasionally cold meat, with proper accompaniments.

During a great portion of the year, breakfast may be considered rather a substantial meal. The generality of European gentlemen rise about day-break, and either proceed to the parade, to their field diversions, or to ride on horseback, or on elephants; thus enjoying the cool air of the morning. From the middle of March to the middle of October, the sun is very powerful,

even when the atmosphere is overcast with clouds of great density. This induces all who ride for health, or for pleasure, to avoid violent exercise; they proceeding, generally in small parties, each gentleman being attended by his *syce*, who carries a whisk made of horse-hair, fastened to a short lacquered stick, for the purpose of driving away the flies, which are generally very troublesome both to the horses and to their riders. It is not uncommon to see the backs of the latter covered with these noxious parasites, which, by their buzzing, and their attempts to alight on the face, produce extreme irritation. During some part of the year, when scarce a leaf is in motion, and the clouds hang very low, exercise, even so early in the morning, is often found more injurious than refreshing: at such seasons, nothing but the abundant perspiration which then relaxes the whole frame, and absolutely oozes through the light cloathing in common use, could prevent the occurrence of diseases highly inflammatory. Many feel so uneasy, in consequence of this unpleasant exudation, as to be induced to change their linen three or four times within the day; but, however refreshing such a change may prove, it is by no means to be commended; experience proving that considerable prostration of strength is the inseparable consequence of so ill-judged an indulgence. The best plan is, to have night apparel, and to ride out in the linen worn during

the preceding evening; changing for a clean suit on returning, so as to sit down to breakfast in comfort.

Those who are subject to bile cannot be too cautious in regard to their diet; which should be rather sparing, and confined to viands dressed in a simple manner. Many gentlemen of the faculty, in England, entertain an opinion, that eggs, moderately boiled, are rather beneficial, than otherwise, in bilious cases: the idea they entertain is, that the yolk assimilates with the bile, and carries it off. But practice is better than theory; and it is to be wished, that such as maintain the above hypothesis could view the number of patients who may be said to owe their pains and sorrows merely to the practice of eating eggs for breakfast. In this climate, to a person possessing a robust constitution, and whose stomach might vie with that of an ostrich, eggs may be innocent; but, in the East, where relaxation weakens the powers of digestion, they are by no means a proper article of diet. If, as physicians assert, assimilation takes place, it assuredly is on the wrong side of the question; for I believe all oriental practitioners will allow, that the bile is considerably augmented, but not carried off, by eggs.

However grateful many of the other items, such as salt-fish, &c., may be, they certainly cannot tend much to the preservation of health;

therefore, should be discarded from the breakfast table. I speak feelingly; for, although I did not possess sufficient resolution to withstand what then appeared a very alluring temptation, I have now the candor to confess, that thirst, heat, and uneasiness were generally attendant upon my imprudence, and no doubt occasioned me to swallow many a nauseous dose, which might have been avoided by a moderate share of discretion. Therefore, let me strongly recommend to those of my juvenile readers who may be about to proceed to India, not to indulge in breakfasts such as I have described.

The tea used in India is generally what we call green, or hyson; very little bohea being drank. It is very rarely that either kind can be obtained good; indeed, the climate speedily renders tea unfit for use, if at all exposed to the air: on this account, leaden catties of various sizes, but generally containing from four to ten pounds, are employed for preserving it. These catties fit in pairs, or, if large, singly, into neat boxes provided with locks. But little tea being sold retail, it is usual for a few friends, perhaps three or four, to club, and buy a chest; which may be had for about 150, or even so high as 200 rupees (£25). This, however, is not the price of the best teas, which occasionally sell for nearly double the latter sum, unless there may be a very large supply at market; when, as it is

a very perishable commodity, the prices sometimes fall even below prime cost. To say the truth, it rarely matters much whether the tea be good, or bad; for it is always made at a side-table by some menial who knows nothing of the matter, and who never tastes it himself: hence, a cup of good tea is really a rarity; which must appear extraordinary, when it is recollected that many vessels import at Calcutta in five or six weeks only from China.

The Arabs now convey immense quantities of fine coffee from Mocha to every part of India; but they sell it at a high price, generally from forty to sixty rupees, or even more, per maund of 82lb.; which brings it, at the latter rate, to 3*s.* 9*d.* per lb. in its raw state. Bourbon and the Mauritius raise coffee, but of an inferior quality; and, within these few years, considerable plantations have been formed at Chittagong; but the produce, though abundant, cannot compare with even the French coffee.

I have often had coffee that tasted very salt, and rather bitter, the cause of which was then unknown to me; but a gentleman, who was 'up to the trick,' assured me it was occasioned by the *frazils* (or baskets) being immersed in sea-water, in order to give the berries that greenish, horny appearance, which is supposed to be the indication of a superior quality.

Sugar-candy is always used for making tea,

coffee, and, indeed, for all such purposes: it is to be had of various degrees of purity, and either of indigenous manufacture, or imported from China. The former kind is sold by the maund, and may be estimated at from twenty to forty rupees; the latter in tubs made of thin deal, and other light wood, in which the candy is packed among dried bamboo-leaves. The price of a tub is usually about twenty rupees, (more or less, as the markets may stand,) for which about sixty pounds weight are obtained.

Although the sugar-cane is, by many, supposed to be indigenous in India, yet it has only been within the last fifty years that it has been cultivated to any great extent: since the failure which took place some twenty years back in the West Indies, it has become a most important article of commerce. Strange to say, the only sugar-candy used until that time was received from China; latterly, however, many gentlemen have speculated deeply in the manufacture, and, by serving themselves richly, have rescued the country from a very impolitic branch of imposition. We now see sugar-candy, of the first quality, manufactured in various parts of Bengal, and, I believe it is at length admitted, that the raw sugars from that quarter are pre-eminently good. I have lately had occasion to purchase some of a very superior fineness, called *Soonamooky*, from a place of that name in the

Burdwan district, which was as high as elevenpence per pound.

About thirty-two years ago, the common raw sugar, known by the name of *g'hoor*, was to be had at three rupees per maund of 96lb. in the upper provinces: this was about three farthings per pound; for a *Sonaut* or *Tersooly* rupee then was exchanged at about two shillings, or even so low as one shilling and ten-pence. In consequence of the great demand for the article, it rose gradually, but in comparatively a very short time, to eight rupees the maund of 72lb.; and it has been so high as twelve rupees, but not, I believe, for any length of time: partial instances could be quoted, of even fourteen rupees being given.

The superior kind, which may often be had nearly white, at least of a dove color, perfectly dry, and sharp grained, under the name of *cheeny*, was formerly about seven, or eight, rupees per maund (of 96lb.); of late, it has risen to full fifteen; and has been up to twenty.

The sugar-candy made in India, where it is known by the name of *miscery*, bears a price suited to its quality: some may be had at twenty, and some up as high as forty, rupees per maund (82lb). It is usually made in small conical pots, whence it concretes into masses, weighing from three to six pounds each.

For further information, I must refer my

readers to Mr. Colebrooke's excellent Essay on the Husbandry of Bengal.

Bread is not made of flour, but of the heart of the wheat, which is very fine, ground into what is called *soojy:* a kind of meal, so far from being pulverized, as to bear a strong resemblance to rather coarse sand. *Soojy* is kneaded the same as is done with flour, but there being no yeast in the country, (I mean such as we know by that name,) it is leavened by means of *toddy;* which is the juice obtained by making incisions into the *taul,* (or palm-tree,) already described. In many parts of India, *taul* trees are very scarce, and are carefully preserved for the sake of the *toddy,* which is sold to the *nonbaies,* (or bakers,) at a high price. In Bahar these trees are peculiarly abundant: there we often see groves, of hundreds upon hundreds, let out to the *kulwars,* or distillers, to great advantage. These venders of misery have the art of rendering the *toddy* peculiarly potent, by causing it to work upon the kernels of the *datura,* that grows wild in every part of India, and possesses in every part, whether the stem, root, leaf, or nut, a most deleterious property. *Toddy,* that has been strongly impregnated with *datura,* (which is the name it bears in the East,) acts very rapidly on the brain; producing mania, and, not unfrequently, apoplexy, when drank to excess.

The bread is usually made into small loaves, weighing about a pound each; these are called 'single-loaves,' and may generally sell from fifteen, to twenty, for a rupee; which brings the bread to about three half-pence, to two-pence, per pound. 'Double loaves' include double the weight, and sell in proportion. A large portion, of both sizes, is baked in tin moulds, of a brick form; these are generally preferred, on account of their rarely scorching, and not requiring to be rasped, as all the other bread, baked in the form of heavy cakes, generally does.

Soojy, (the basis of the bread,) is frequently boiled into 'stir-about' for breakfast; and eaten with milk, salt, and butter; though some of the more zealous may be seen to moisten with porter; a curious medley, by no means to my taste! Nor is much to be said of its qualities; as few stomachs are suited to its reception.

The camp-oven in common use, consists merely of a very large *naud*, or pot, capable of containing from thirty to fifty gallons, and of rather a conical form. This vessel is prepared for the purpose, by having a hole punched through its bottom, large enough to admit a man's arm; it is then placed, mouth downwards, over a corresponding cavity, dug out of the soil, so as to fit close every way; but, in order to

allow a proper draught of air, two, or more, sloping apertures are left, passing under the circumference of the *naud.* The vessel is next well covered with turf, &c., and thus rendered capable of retaining considerable heat, long enough to bake small bread. The interior being filled with chips of wood, charcoal, *gutties, (i.e.* dried cow-dung,) or any other kind of fuel that may be at hand, a strong fire is kept up in it, until the *naud* appears to be nearly at a red heat. The hole, which served for a chimney, is then closed; and, the embers being withdrawn, the bread is introduced upon pieces of iron plate, or of tin, or boards, or leaves, &c., &c.

I should here remark, that the natives invariably eat unleavened bread, generally made of wheaten, or of barley-meal; which, being made into a good dough, is flattened into cakes, called *chow-patties,* between the hands, with very great dexterity. Such cakes are then either put at the edges of the heated *choolah,* or fire-place, or they are baked upon a convex plate of iron, circular, and about ten inches, or a foot, in diameter. This plate, called a *towah,* is precisely the same as the *girdle* made in Scotland for baking their oaten bread, and is used in the same manner.

Milk is to be had in abundance throughout India, especially among the Hindus, who venerate the cow, and follow all occupations relating to the dairy; but, owing to the general custom

of smoking the insides of whatever vessels are allotted to its reception, will not be obtainable in such a state as suits the palate of an European, unless a clean pitcher, &c., be sent to the *gwal-lah*, or cow-keeper, that the cow may be milked into it.

That fuliginous taste, to us so obnoxious, is perfectly palatable, and perhaps agreeable, to the natives; who assign, as the reason for smoking their vessels, that it prevents the milk from turning. It, however, becomes a question, whether or not the operation of scalding, always performed when practicable, while the milk is warm, be not the true preventive against acidulation. Certain it is, that sour milk is very rarely found in India, although, for full half the year, the thermometer is generally up between 75°, and 95°, in the shade; and, in a Bengallee hut, frequently rising to 110°, or more!

The milk obtained from buffaloes is certainly much richer than that from cows; yet, the butter produced from the former is very inferior, generally white, and brittle: it, however, possesses qualities suiting it admirably to the climate, and occasioning the natives to give it the preference. After being warmed to a certain degree, so as to become rather liquified, it is kept nearly stationary in that state for a long time; whereby it loses its aqueous particles, and is rendered fit for keeping. When

thus treated, it is called *ghee*. Others deviate from this tedious process, and, by exposing it to a greater heat, keeping it simmering for some time, effect the purpose more speedily, but not without danger of burning, or, at least, of giving it a certain empyreumatic flavor. Few of the natives will touch cow-butter, to which they attribute many bad effects, though they will drink *ghee* by the quart, and pride themselves not a little in being able to afford so luscious an enjoyment. The uncontrolled expenditure of this article, among those whose purses will bear them out in the indulgence, though it may tend to that obesity of which they are inordinately vain, cannot but contribute greatly to the generation of those bilious diseases which so often attack the more opulent natives. *Ghee* and idleness may be said to give birth to half their ailings. As an article of commerce, *ghee* possesses some claim to importance; many thousands of maunds being sent every season from some of the grazing districts, such as *Purneah*, and *Sircar-sarun*, to the more cultivated parts, and especially to the western provinces. The *ghee* is generally conveyed in *dubbahs*, or bottles made of green hide, which, being freed from the hair, and worked up while in a pliant state, into the form of a *caraboy*, such as we use for spirits of turpentine, &c., will keep sweet for a long time, provided the mouth of the vessel be

well closed. In this manner it is conveyed by water in *dubbahs*, often measuring nearly a hogs-head; but a smaller kind, containing, perhaps, from fifteen to twenty gallons each, are made for the purpose of being slung across the backs of bullocks, by which it is carried to places situated at a distance from navigable streams. The price of *ghee* varies according to the demand, and to its quality: generally, from six to eight seers of 2lb. each may be had for a rupee in favorable situations; otherwise, it will be from thirty to fifty per cent. dearer. It may be supposed that buffaloes' milk must possess a very considerable portion of cream, when it is stated, that milk is considered very cheap at 30 seers (or quarts) for a rupee, and that five seers of *ghee*, equal to one-sixth of the mass of milk, may be had for the same sum, in almost any part of the country. According to this proportion, we find that one-sixth part of the milk turns to butter; whereas, in this country, a cow, yielding twenty gallons of milk within the week, will rarely produce ten pounds of butter; which is equal to only one-eighth part of the mass of milk: it must, indeed, be a good cow that will produce that quantity.

The *d'hoob* grass, which grows wild in almost every part of the country, is peculiarly nutritious; but the food of cattle, of all descriptions, throughout India, is more dry and solid than is

offered to cows in England. Hence, though the quantity of milk yielded by a buffalo, may not be equal to that of an English cow of equal weight, the produce in butter, from an equal quantity of milk, will be in favor of the former.

I have already stated the difficulty of getting milk devoid of the taste of smoke; this arises from the cause already described, and is encreased by the very small proportion of milk yielded by the cows in India, which are, with few exceptions, white, and rarely grow larger than the generality of yearlings, or steers, bred in England. In some grazing districts they thrive well, attaining to full thirteen hands in height, and weighing, when fit for the butcher, from four to five hundred weight: but such are merely local, and not very numerous. Butter produced from cows' milk is very indifferent, unless carefully made from such as are well fed. The number of gentlemen keeping dairies is extremely confined, perhaps less than ten for all India: they certainly obtain excellent butter, but that sold by the *muckun-wallahs*, (*i. e.* the butter-men,) would appear, to a stranger, not to be made from the same species of animals. Considering the price of a cow, which may be averaged at from four rupees to eight, (*i. e.* from ten to twenty shillings,) it is remarkably dear, as is usually the case with articles of inferior quality: thus, we consider three

pounds for a rupee to be a fair rate, though sometimes four may be had; but such can only happen where cattle are very abundant; for, as I have already said, buffaloes, and not cows, are almost invariably kept by the natives for their milk, on account of their greater produce, and because the *ghee* made from their butter is more appreciated. We may, therefore, estimate the pound of cow-butter at nine-pence; whereas, *ghee* rarely sells for more than three-pence: a strange disproportion; to be attributed, in some measure, to the demand for the former being confined to the Europeans.

In speaking of the *berriarah*, or shepherd, I have already noticed, that, for the supply of their tea-tables, gentlemen usually keep a few goats, which afford milk of a remarkably fine quality, and are herded in company with those store sheep intended to supply vacancies among the fatting stock. The kids produced, generally twice in the year, by each milch-goat, (mostly twins, and not unfrequently trins, or even four, at a birth,) serve to keep up the number of the flock, besides yielding occasionally a most delicate viand for the table. I know not of any meat more sweet, or wholesome, than that of a kid allowed to suck the mother at pleasure: it is as white, and, in proportion, as fat as any veal. Being in general request, and admirably suited to making rich *curries*, as also roasting remarkably

well, kid-meat may be had of any butcher; the usual price being a rupee for a whole kid, and in proportion for halves and quarters. When of a good size, and duly fatted, an entire one may weigh about six pounds; which brings the meat to five-pence per pound.

By the word butcher, we are not to understand the individual to be a shop-keeper, exposing the several joints of various animals for sale, in that pleasing mode of exhibition so common in our markets. On the contrary, a fat *kussee* (*i. e.* cut-goat,) or two, and two or three kids, daily, with, now and then, a half-fatted ox during the cold months, may be said to comprizé the whole business of one of this profession in full trade; indeed, a first-rate knight of the cleaver! The greater part of the profit arising to this class, is derived from slaughtering oxen, calves, pigs, sheep, and kids, for families; for which labor they ordinarily receive a few annas, (or two-pences,) according to the size of the animal: in most instances they take the skin, pluck, and, of some, the head, as a perquisite.

It is impossible to produce finer mutton than is served upon table in India; nor can there be finer beef than is to be seen in most cantonments, and among fixed residents. At some of the principal military and civil stations, those gentlemen who keep a regular table, usually fatten several bullocks for winter slaughtering. Some

of these are fed full two years, with that intent, on *gram*; and, exclusive of being burthened with fat on the kidneys, &c., have their flesh absolutely marbled by the admixture of fat among the fleshy parts. Sometimes, the officers of a regiment club to fatten four or five head, the joints of which are either divided according to mutual concurrence, or drawn for by lot; this supplies fresh beef during the winter season; very few bullocks being killed at any other time, on account of the extreme difficulty of curing the meat. To persons inexperienced as to the hasty strides of putrefaction in hot climates, this forbearance from beef, for so large a portion of the year, might appear unnecessary; but the fact is, that, during the close weather, prevalent throughout the rains, and for a certain part of the hot season, meat, though killed only about midnight, will often become absolutely putrid long before the time at which it ought to be on the spit; and that, too, in spite of every precaution!

The markets at Calcutta are open at daybreak; when very fine meat, of every kind, together with various sorts of choice fish, fruits, vegetables, &c., may be had on very reasonable terms. There, indeed, beef may sometimes be seen in the hottest weather; because, being cut up into small joints, a bullock may be readily sold off among so many customers; but, in

general, the prime pieces, together with all the best fish, &c., will have been bought up by sun-rise: the refuse joints are generally taken by the Portugueze, (who are the only customers for *bazar*-pork,) and by Europeans of the lower classes, or by persons who supply the shipping. The whole of the non-commissioned and privates, in the several regiments of Europeans, are served with meat, rice, spirits, and fire-wood, by contract; receiving their several quotas early in the morning, under the inspection of their commissioned officers, who make their reports regarding any deficiencies, either in quantity, or of quality.

Those gentlemen who produce pork at their tables, are extremely particular as to the manner in which their pigs are fed. Many are so extremely fastidious, as not to allow any to be served up unless *educated*, as it is called, in their own sties; the very circumstance of being *born* elsewhere, absolutely disqualifying, and rendering of no avail, all that change of bulk, and all that purification, derived from perhaps a whole year of confinement to a clean stye; in which nothing but the best corn *(gram)* is given to the grunting inhabitant. This, certainly, is carrying daintiness to an extreme; but it must be confessed, that swine are so offensively greedy in the indulgence of their appetites in that part of the world, as to give occasion for

many very reasonable scruples regarding the use of *bazar*-pork; which is indiscriminately killed from the fattest of those wanderers that sometimes absolutely interrupt the operations of the multitude, who resort, generally at dusk, and at day-break, to lay their offerings at the shrine of a certain deity!

This calls to mind a very laughable circumstance which happened at Berhampore, in 1803. An officer, who had been many years at Gibraltar, where a joint of meat, of any kind, was probably snapped up without any questions being asked as to its *education*, produced at his table a very fine corned leg of pork, of which all his guests ate with great avidity. One of them, when the repast was over, begged leave to enquire how the gentleman kept his pigs; what had been then on table, being of so superior a flavor, that he presumed it was *educated* in some very particular manner. 'Oh no,' answered the host, 'I never trouble my head about sties; my man bought a whole side of it this morning of Neeloo the butcher, for eight annas' (15*d.*) This untimely disclosure operated not only like magic, but like emetic tartar; the whole company were taken with violent sickness, and retired to give vent, both to the pork, and to their feelings, on so dreadful an occasion. However, none died in consequence of having been thus poisoned; but the whole station received the

tale with horror, and resolved, to a man, never to accept another invitation from the unfortunate hero of the rock!

Whether it be owing to the foregoing cause, or, that the time necessary for the completion of a pig's '*education*,' be too protracted to allow of persons, subject to removal, engaging in that branch of domestic economy, may be difficult to determine, but certain it is, that very few officers have piggeries; they commonly content themselves with hams and cheeks imported to them from England. The grossness of the viand is, however, so very inappropriate to the climate, that, even after the most delicate course of management, pork is by no means considered a choice dish: sucking pigs are more generally approved.

Veal is so very seldom to be obtained in the market, of a quality fit to be brought to table, that it is customary for four or five friends to subscribe for the purpose of rearing calves for their own expenditure; each taking a share of every calf that is slaughtered. The best, and most economical plan, is to agree with some butcher, through whose means alone it can in general be effected, to receive of him a cow and calf, the latter being newly born, and to return him the mother, after the calf may have been killed, together with four rupees (10*s.*) By this mode, the calf will thrive admirably, provided the cow

be well fed; but it is usual, and I have practised it with great success, to give the little one as much scalded milk as it can drink, three times daily; drenching it with either a horn, or a quart-bottle: from three to four quarts, in each of which the yolk of a fresh egg is beat up, will commonly produce the desired effect, rendering the meat very fine by the end of a month; the usual age at which they are slaughtered. What with the keep of the mother, the milk and eggs given to the calf, and the necessary attendance, a gold-mohur, (£2.,) will generally be expended upon each calf, unless several be kept together as a successive supply for the table; in which case, about twelve rupees will be found the average expence. In this, I reckon the out-lay upon a calf that will now and then, perhaps one in five, prove a bad subject; and, notwithstanding every precaution, either scour or pine.

It is a great misfortune that, on account of the extreme antipathy the horned cattle of India always exhibit towards Europeans, no possibility exists for remedying many bad practices, and neglects, to which these animals are subject, when under the care of the native servants. An Indian ox, or cow, when at liberty, is always shunned very carefully, lest it should indulge its savage disposition. On first entering that country, the cattle would be supposed to be wild, instead of domesticated; for not one in a thou-

sand will admit the approach of an European; nor are they always less gentle towards strangers of any description. As to what are called *tame* buffaloes, they are commonly more fierce than any British bull, and, when they have calves at their sides, make no scruple of attacking man and horse, with unbounded ferocity. Hence, it is extremely proper to be very cautious of approaching herds, or single cattle of either kind, even when tolerably mounted. Sometimes, in riding through the country, and especially where *jeels* (lakes) are to be forded, or pools to be passed, the unwary traveller may find himself, on a sudden, within a few yards of a whole herd of buffaloes, which, to avoid the heat of mid-day, wallow in the muddy water, so deep as to have, in general, only their noses and eyes above the surface. Being, perhaps, among rushes, &c. even those parts are not discernible, or, if in an open expanse, may be easily mistaken for clods of mud; for the horns lie back towards the false ribs. On a sudden, the whole herd sometimes rise, and at the least frighten the horse, whatever the rider's heart may be made of: such a surprize, and from animals that, according to the old saying, 'give but a word and a blow, and the blow comes first,' is far from pleasant. In such situations, all depends on the conduct of the leading bull; if he snorts, shakes his horns, and

advances, the danger is imminent. But it frequently happens, that, whether owing to lassitude, or the absence of any object particularly irritating to buffaloes, of which a red coat may be considered the extreme, the herd content themselves with rising from their reclined postures, and, after those who rouzed them may have passed on, again sink into the friendly pool.

The British settlers in India are extremely indebted to the Dutch for many essential improvements. The small town of Chinsurah, situate about twenty-eight miles north of Calcutta, on the banks of the Hoogly river, has, in this instance, proved serviceable to India at large. The Dutch, to whom that place appertained before the war, were the first to introduce the culture of that invaluable esculent, the potatoe; which was received from their settlement at the Cape of Good Hope: they likewise were the first to exhibit any disposition towards horticulture. From them the British received, annually, the seeds of every kind of vegetable useful at the table, as well as several plants of which there appeared much need, especially various kinds of pot-herbs. They likewise supplied us with vines, from which innumerable cuttings have been dispensed to every part of Bengal and its upper dependencies. The whole of the lower provinces, at least,

those parts skirting the ranges of hills that bound them, produce immense quantities of wild vines, which, during the rains, may be seen partially to bear grapes of a red color, and about the size of a pistol-ball. These vines tower over the high *saul* trees, or creep along the rocky masses, throughout the Ramghur district especially, in all the majesty of wild luxuriance.

Here is a field for speculation! Let us suppose, that the wines which should be raised might not prove of the best quality, still we might derive the most important advantages from the brandy and vinegar to which they might be converted. As to wood for the staves, and iron for the hoops, they are both to be had on the spot; and, in regard to distillation, abundance of men, sufficiently skilled, may be found among the natives. Fuel is every where abundant, indeed, a perfect nuisance. The only impediment I could ever discover, is, that the neighbouring streams are not generally navigable, or, perhaps, only for a few months in the year: they might, however, be easily rendered adequate to every purpose, there being lime-stone in various adjacent hills, while, among the convicts, who are in a state of idleness for the most part, many persons might be selected fully capable of constructing whatever masonry, or timber-work, should be found necessary.

Some years ago, I had the honor of submitting

this suggestion to the Court of Directors. The India minister of that day was forcibly struck with the facility obviously afforded of founding an immense national concern: and, had he remained in office, would probably have taken means to ascertain every point contained in my memoir, with the utmost exactitude: the result must have been perfectly satisfactery.

When we consider, that the Company pay two lacs of rupees (£25,000.) yearly for spirits, of a very inferior quality, for the use of the European soldiery; and, that good vinegar cannot be had under two rupees per gallon, (*5s.*) it should seem an object, even in that limitted view, to cultivate the vine for their own use; but, if we extend the prospect, and shew that any quantity of brandy, if not of wine, might be imported from Bengal, the benefits will be found so great, as to claim every encouragement on the part of the legislature. It appears highly probable, that full a million sterling would be annually saved to the nation, by its adoption of this speculation; which might be began at little or no expence, and be progressively extended, by giving employment to the whole body of convicts, who now are a heavy burthen on the revenue, without doing a thousandth part of the service of which they are physically capable. If my information be correct, there are now sold at Calcutta near four thousand pipes of Madeira,

Teneriffe, &c., annually, and about as many chests of Claret, including French and English; the quantity of Brandy imported at that settlement is full 10,000 gallons, besides Hollands, Rum, and other liquors, of which I shall make no account. The licences granted for the retail of spirits are amply abundant; and the number of shops where *Toddy, Mowah, Pariah Arrack,* &c., are served out, absolutely incalculable.

From the best computation I have been enabled to make, full 10,000,000 gallons of spirits are made and sold in Bengal and its dependant provinces, the average of which may be taken at one rupee per gallon, as it comes from the still; the retail prices will, no doubt, double that sum; making no less than 20,000,000 of rupees, equal to £2,500,000 expended annually by debauchees, and by the regular consumption among the soldiery, &c. If the foregoing items be put together, they must make a tremendous total; while we shall see, that a most ruinous intercourse prevails, throwing money into the pockets of our rivals, and enabling them to carry home investments in exchange for their own produce. We shall further see, that, supposing a duty of only 25 per cent. were imposed on all spirits sold, exclusive of the amount of licences, which are very trivial, no less than £625,000. would annually flow into the treasury. This may appear a

very large sum, but, when it is recollected that the manufacture of salt, monopolized by the Company, yields, on the average of several years, the sum of £1,500,000., (after deducting about £525,000. for the expences of boiling, &c.,) we may fairly consider the above computation to be far within the bounds of probability.

Rum is made in Bengal from refuse sugar, the same as in the West Indies; its quality is by no means inferior, though it sells, when new, at the very cheap rate of about a rupee the gallon. It is to be had, of a good age, of the several great distillers and merchants, at a proportionate advance. I have known it, after being six years in the *godown*, (warehouse,) to be compared with Jamaica Rum, warranted ten years old; when the preference was given decidedly in favor of the former. With respect to arrack, which is in a manner peculiar to the East; the native distillers produce excellent alcohol, which, after being properly rectified, and kept for some years, proves an admirable spirit, supposed to be far more wholesome than rum.

Though, on the whole, the fish brought to the Calcutta markets, cannot be compared with such as we see at Billingsgate, &c., there are, nevertheless, some kinds, which might please the most dainty epicure. The *hilsah*, (or sable fish,) which seems to be mid-way between a

mackarel and a salmon, whether for form, general appearance, or flavor, is, perhaps, the richest fish with which any cook is acquainted. It abounds so with fat, that most persons, after being served with a portion, immerse it in boiling water, brought in a soup-plate; thereby causing a large quantity of grease to float. When baked in vinegar, or preserved in tamarinds, the *hilsah* is remarkably fine.

Like the salmon, these run up to the very spring-heads, seeming to abound more and more in proportion as they approximate thereto; though certainly they grow to the largest size, immediately within the tide's reach: getting beyond that, they dart up as far as possible during the season, returning, after spawning, to the sea. They are in perfection towards the latter end of the rains.

The *bickty*, (or cockup,) very strongly resembles the jack, and grows to an enormous size. I have seen one measuring more than eight feet in length, and various others that weighed full a maund (82lb.) The average size at which they are brought to market, may be from eighteen, to thirty, inches in length; and their weight from two to ten, or twelve, pounds. They flake like cod, to which also their flavor greatly assimilates.

Soles, of a diminutive size, are sometimes to be had at Calcutta: the natives call them *koo-*

koor jibbys, (*i. e.* dogs' tongues,) in allusion to their shape. These are sometimes caught in the brackish waters, among the *bicktys*, or cockups, or in the flat sands about Diamond-Harbour, &c. *Prawns* of a very good size, and very small cray-fish, are to be found in most parts of the country, as also a kind of eel, called *baum*; which, however, bears more resemblance to the gar, or guard-fish, of which millions may be taken in most of the fresh-water *jeels*, (lakes,) though rarely exceeding a foot in length.

The *rooy*, or *r'hooee*, is a species of the carp, as is also the *meergah*. They are both abundant in the great rivers, and in all the waters connected with them, though the former are most numerous, and thrive greatly in ponds. The latter are of a browner color, and rarely exceed ten pounds in weight, whereas, the former are often found of fifty lb., and sometimes up to a maund.

The *cutlah* is a species of the perch, though some consider it to be of the bream-kind: it is only found in the great rivers, is generally of a dark color, approaching to black, and commonly weighs from ten to sixty lbs.

The whole of the above, viz. The *r'hooee*, the *meergah*, and the *cutlah*, may be taken by angling; as may also the *soly*, a species of the jack, and nearly as voracious.

Trouts, about as large as smelts, are sometimes

to be seen in those small streams that have their rise among mountains, but they are not so distinctly spotted as we see them in Europe: they are, indeed, very scarce, and generally bear a small red, or gold, or black, spot on each scale: the adipous fin, by which all the salmon tribe are distinguished, is scarcely elevated above the loins.

The fresh-water anchovy, called by the natives *çhelwar*, is to be found in shoals on every flat sand throughout the great rivers: these are generally scared, so as to precipitate themselves on the beach, by two men, who, wading in the water up to their knees, gradually draw a line of fifty or sixty feet in length, every where laden with small, colored rags, in such manner as to enclose the *çhelwahs* in a crescent, and ultimately to drive them ashore. Occasionally, *mullets*, of a small size, are found among the booty: they are remarkably sweet and firm. Nothing can be more common than to see shoals of them struggling against the current, especially in the cold months, with their eyes out of the water. Their motions are very nimble, but it is not uncommon to see several killed by a round of small shot, from a common fowling-piece: they are not to be taken by angling. As to the *tingrah*, a kind of fresh-water gurnet, it is extremely voracious, and grows to a good size; often weighing eight or

nine lbs.; though the average may be from two to four. They are very strong, and afford ample amusement when hooked. The *skait* grows to full twelve or fourteen lbs., and is common in all the great rivers; but, it must be handled with caution, on account of its having a dreadful spine about the centre of its tail. These two last-mentioned fishes are rarely seen at table; nor is the *buallee*, which is rather flat, and has a continued abdominal fin, the same as eels. This fish is extremely coarse, but desperately rapacious; seizing almost any bait with avidity, but affording little sport when hooked.

The *puftah* is of the same description, but, in lieu of weighing, as the *buallee* often does, from ten to fifteen lbs., seldom amounts to so many ounces. Its flesh is remarkably rich and sweet, but, when hooked, it is as little disposed as the former to resist. The most esteemed fish is, that called by the natives *tupsey*, but by us '*mango-fish*,' on account of its appearing about the time that *mangoes* first come into season: it comes up with the tide. In appearance, it is not unlike the smelt, though rather deeper, and with reddish fins. The flesh of this fish is fine, but its roe is deservedly esteemed to be delicious. An immense quantity are cured, by being slightly salted, and sun-dried; after which, they are smoked for a short time over a fire made of chaff, &c.

Turtle, of about a cwt., are to be found in almost every river and creek, as also in some of the large *jeels*; though they are very rarely seen in standing waters, and then, perhaps, only in a state of migration. The flesh of these is peculiarly unwholesome; and, so far from being, like the sea-turtles, composed of parts resembling fish, flesh, and fowl, may be aptly compared with bacon of the coarsest description, with some tendency to rancidity. The *batchwah*, or 'fresh-water herring,' (though it has no scales,) is one of the best fishes the Indian rivers produce; but a general prejudice is entertained, with much justice too, against its selection of food. The most appropriate baits for most fishes are the *goorgoory*, (or *gryllus monstrosus*,) and the *cock-roach* (or *blatta*). It would be endless to recount all the kinds of fishes to be found in the streams and lakes of India; but it may justly be stated, that, in some parts, their numbers are so great as absolutely to corrupt the waters. With respect to the minor species of fish, occasionally served at table, they are very numerous, and, in most places, abundant: every creek and *jeel* is replete with them, and every village in their vicinity contains persons provided with some kind of apparatus suited to catching an ample supply. On the larger pieces of water, there are usually either canoes or *dingies*, which, together with their owners, are subservient to the *jemmadars*,

or head-boroughs, and may also be set in motion for a very trivial present, made ostensibly to the laborer, but commonly transferred privately to that proud, imperious, and avaricious officer.

POULTRY next come under consideration: of this, great variety is to be found. Fowls, capons, ducks, geese, turkies, and pigeons, are for sale in every city, or great station, at very moderate prices. In general, taking an average of all places, fine chickens, called *chujahs*, may be had at ten for a rupee (*i. e.* 3*d.* each); middle-sized, or *meem-kabobbies*, (small roasters,) at seven or eight for a rupee (about 4*d.* each); and good-sized roasters, or *kabobbies*, at five for a rupee (about 6*d.* each).

Capons are only to be had in particular parts of the country; generally they are white, and so cheap as to give ten or twelve for a rupee; though I have purchased no less than twenty-nine for that sum, (*i. e.* 1*d.* each,) in the Tomar district, where they are produced in immense numbers by the *Pahariahs*, or Hill people, of that mountainous district. These people are more immediately distinguished by the designation of *Dangahs*: they are of a small stature, very, very poor, rather squalid, but capable of undergoing great fatigue: they are wonderfully adroit in the exercise of the bow; and, after performing the little labor needful for the cultivation of the vallies, generally repair, at certain

seasons, to the military and civil stations in the neighbouring districts of Ramghur, &c., where they serve as bearers; especially on the new-road, which is much frequented by gentlemen travelling *dawk*, (post,) in *palanquins*, to or from the upper stations.

Ducks are of various prices, but may be considered at an average of four or five for a rupee (about 7½*d.* or 6*d.* each); and geese at a rupee each. These thrive prodigiously throughout India; but it is far otherwise with turkies, which are extremely tender, and cannot endure the great heats of summer, unless allowed to graze upon a plot well watered, and generally sheltered from the sun. It is not uncommon to see them crowding to some little verdant spot under the shade of the lee-side, where a current of air, refrigerated by the *tatties*, passes out from the *bungalow*, &c. Without some such restorative, they would, to a certainty, pine away, and speedily disappoint the hopes of their owner. Among the grass on the plots generally preserved near the dwelling, it is common to see immense numbers of ants, of all descriptions, which resort thither both for coolness, and for the collection of the seeds that are perpetually falling. It is very strange, but true, that these little depredators are not easily deterred, by the water being laid on occasionally, from forming their nest in such plots of grass, though they generally prefer some

dry, hard walk, or level area, along which they form little paths, by laying the gravel, &c., aside; so that their progress is not obstructed when robbing some store. Many of these paths may be traced for fifty or sixty yards; occasionally, they are double; one being appropriated for the egressors, the other for those returning laden with the booty. When the turkies light upon such a line of march, they fall to with a famous appetite; seeming to rival our pheasants in that particular, and exhibiting the satisfaction they feel on receiving a supply of their favorite food. In thus devouring the ants, they do great service; for, I know not of any more unpleasant companions than the little tormentors in question, whose bite is extremely keen, producing considerable irritation. Some of these ants grow to full three-quarters of an inch in length, and are capable of causing great pain. Many prevent their being destroyed, under the opinion that they feed upon white-ants: this I never could establish, though I believe they are ready enough to march off with the body of a dead white-ant, the same as they would with any other morsel of animal substance.

The difficulty of rearing turkies, renders them extremely scarce; hence, it is not uncommon to pay a gold mohur (£2.) for a well-grown, fat, turkey-cock: few, either cocks or hens, are to be had in any part of the country, for less than half

that sum; and then chiefly from Portugueze families, that make a livelihood by rearing them. About Bandel, a Portugueze town, some thirty miles above Calcutta, great numbers are reared; as are also ducks, and geese, in abundance. At all the great stations, both civil and military, some persons of that description generally reside, through whose industry families are supplied. Fowls are reared by the same persons; though less an object to them, as almost every Mahomedan family maintains a few, mostly for its own use, but sometimes for sale. As to the Hindûs, nothing could be more criminal than such a speculation: the very touch of a fowl being considered the acmé of pollution. From this we may judge how necessary it is to be guarded in making changes in the dress of our native soldiers; whose zeal and fidelity are unquestionable, but who instantly revolt at any invasion, however slight, of their religious tenets, or of their vulgar prejudices. Those who affect to consider such to be easily overruled, or, who vainly talk of *coercing* so many millions to adopt our faith, would do well to take a trip to Bengal, and to insist on any Hindû menials, or others, under their authority, wearing a feather in their turban.

As to the numerous species of wild game, such as antelopes, hog-deer, hogs, geese, ducks, teal, snipes, ortolans, quails, partridges, flo-

rikens, (or bustards,) pigeons of sorts, wild and tame, hares, &c., they are generally to be had in abundance; those of my readers who wish for a more detailed account, will find it in my 'WILD SPORTS OF THE EAST,' published in folio, with colored plates, as also in quarto royal, and imperial octavo, by Mr. Edward Orme, of Bond-street, and by Messrs. Black and Co. Leadenhall-street. In that superb work, the details of every branch of hunting, shooting, &c., will be found.

There are no wild rabbits in India, but great numbers of tame ones are to be had at Calcutta, and at some of the subordinate stations. The prices vary according to demand, age, and condition; but we may take the average at four for a rupee when half grown, and at double that rate when fit for the table. It is, however, extremely difficult to preserve them in safety from their numerous enemies the dogs, jackals, foxes, cats, rats, bats, snakes, hawks, crows, &c.

Having, I believe, generally discussed what relates to the supply of the table, I shall proceed to the description of other matters relating to the convenience and service of gentlemen resident in the East.

The dinner table is invariably laid with two cloths; one of the usual size, the other about large enough to cover the surface only: this last is removed when the meat is taken off; so that

the dessert is laid upon the lower one, which has, in the mean while, been preserved by it from stains, grease, crumbs, &c. A napkin is laid with every cover, together with a tumbler or rummer, a long glass for Claret, and an ordinary-sized one for Madeira. Each glass is provided with a cover, which may be lifted off by means of a stud in its centre. In opulent families, these covers are usually made of silver, otherwise of turned wood. It is remarkable, that some of the common indigenous woods have the peculiar property, when used for this purpose, of imparting a most offensive smell, attended with a similar flavor, to water, &c., if left for a few minutes.

The knives and forks are all of European manufacture, though, within these few years, some excellent imitations have appeared. I doubt if *Blacky* can, as yet, bring his work so low as our artizans, though he certainly has the advantage of them in cheapness of living, and in being generally exempt from the operation of a variety of taxes. This deficiency on the part of the natives, proceeds from their being obliged to perform all those operations by hand, which we both accelerate and perfect by means of machinery. The greater part of the plate, used throughout the country, is made by native smiths, who, in some instances, may be seen to tread very close on the heels of our jewellers,

not only in the graceful form of the articles manufactured, but in the patterns, whether carved or embossed. Such specimens of perfection are, however, rare, and are produced chiefly under the superintendence of European masters; though I have seen some pieces, made by *sonaars*, (goldsmiths,) totally independent of such aid, or instruction, which displayed much skill and some taste. Speaking, however, of the common workmanship of this class, it must be put out of all comparison with British plate, on account of its being indifferently shaped, and rudely ornamented. Hence, such plate as is sent from this country, as well as what is made up by Europeans settled in India, very generally sells for full 25, or even for 50 per cent. more than what is manufactured by the native artizans.

The whole of the glass-ware used in India, is furnished from England, and commonly sells at full two, if not three, hundred per cent. on the prime cost: this is not unreasonable, when we consider how brittle the commodity is, and that the extent of sale is not so considerable as to render it, individually, an object of adventure.

Table cloths and napkins are manufactured in several parts of the country, especially at Patna, Tondah, and most of those cities where piece-goods are made. The beauty of some fabrics of this description is very striking; nor is their

durability less conspicuous. I have by me, at this moment, some that have been in constant use for full twelve years, and my stock, at no time, exceeded a dozen and a half of table cloths. The prices of such may be supposed to vary according to quality; but a very superior bird's eye may be generally had for about two rupees per square yard; observing, that the cost will necessarily be somewhat encreased in proportion to the greater extent of the piece. Others, of a coarser texture, and of a plain diaper, are to be had extremely cheap: perhaps as low as eight annas (15*d.*) per square yard. Such are, however, extremely flimsy, and never appear creditable. Towels are also manufactured at various prices; some reaching so high as two rupees (5*s.*) each, while others may be obtained by the dozen for the same money. The best for common use may be rated at about five or six rupees per dozen. A kind, generally of mixed colored borders, wove in, is made at Chittagong: these are rough, like what we call huckaback, and are peculiarly well calculated for drying and cleaning the skin after washing; but they are not so durable as the plain diapers.

Great quantities of furniture are sent from Europe, being first taken to pieces, and packed within a very small space. Of this description, mahogany tables and chairs form by far the

greater portion; few other articles being shipped, though now and then we see a few bureaus, secretaires, ecritoires, &c., among a cargo from Europe. All such commodities would bear even a higher price than is now charged for them, were it not that, among the natives, as well as among the European carpenters, and joiners, settled in Calcutta, the British mechanics experience considerable, and very successful, rivalship.

The excellent woods, of different kinds, produced in almost every part of India, and the facility with which they may be brought to market, present the most favorable aids to the Indian artizans; but, owing to the want of capital among the natives, the work done by them is rarely found to answer: it warps dreadfully, and sometimes rives from one, to the other, end. This is entirely owing to the deficiency of seasoning; for we find, that whenever a gentleman is at the pains, and has the opportunity, to saw up his own wood, and to season it properly, it will commonly be found to answer his expectations fully; both in respect to durability, and to the polish it may take. Although there is, in some instances, an obvious cheapness in employing a native carpenter, it may safely be asserted, that, on the long run, what with delay, impositions, imperfections, &c., it is frequently found to be a very round-about way of saving a trifle. I strongly

recommend to all persons arriving in India, to visit the several depôts of furniture to be seen at every auction-warehouse, and generally at the *godowns* (warehouses) of the European shop-keepers. There is, besides, a whole street, called the '*china-bazar*,' as well as various scattered boutiques, appropriated entirely to the display of European articles, and of china-ware, of every description; all which are sold for ready money only, by a tribe of Hindu speculators, who, from attending at auctions, are enabled to make cheap purchases, and become perfectly acquainted with the qualities of every article; or, at least, with such points as give a preference in the eye of an European. In this *bazar*, (or market,) almost every thing an European can require, for common purposes, may be obtained: he may, indeed, purchase an ample library, either of new, or of second-hand books; and, generally speaking, may equip himself in such a manner as may enable him to keep house at full thirty per cent. cheaper than among the European shop-keepers.

Though we may find a few trades, such as coach-making, jewellery, cutlery, armoury, &c., perfectly distinct, and unconnected with any other speculation, we are not to suppose that commodities, in general, are separately classed, and exhibited in shops solely allotted to them. On the contrary, what we call an 'Europe-

Shop,' affords a rich display of that heterogeneous kind of cargo imported in every merchant-ship proceeding to that quarter. Consequently, each shop offers an astonishing variety of wares. Liquors of all kinds, guns, pistols, glass ware, tin and copper ware, crockery, stationary, shoes and boots, hosiery, woollens, linens, ironmongery, hats, cheese, grocery, and an infinity of articles of the most opposite natures, may be found in the spacious rooms, and *godowns*, allotted to the exhibition of the miscellaneous profusion!

Though it is not common to see European goods, especially those which are not immediately perishable, selling for less than thirty or forty per cent. advance upon the *salt-water* invoices, it sometimes happens, that an immense importation of some few particular articles may lower them to full fifty per cent. under prime cost. This is easily accounted for: for instance, should hats, shoes, and boots, bear a great price at the time a fleet is about to be despatched for Europe, all the commanders and officers note it down, for the purpose of making those articles bear a large proportion in their next outward-bound cargoes. Thus, each unwittingly becomes the dupe of his own avarice; and, on the return of those ships to India, experiences the lamentable effects of having allowed himself to be guided by former prices. I recollect hearing an officer

on board one of the Company's ships declare, that he made it a rule always to lay in a good stock of those articles which were cheap at the time he quitted India; for, that he was certain the lowness of the prices would influence the others of his class to avoid purchasing them for the India markets, which, by the time of his return, he invariably found to have regained their former level. By holding back a little while, until the Europe shop-keepers found that he was the sole, or, at least, the principal, importer of those goods, he had never failed to make a very profitable bargain.

However much we, in Europe, may admire genuine china-ware, our countrymen in the East seem, for the most part, indifferent to its beauties; they preferring our ornamented Staffordshire ware; which, owing to its bulk, and brittleness, necessarily sells at a very high price in every quarter of India. What is called 'a long set,' by which we mean a service equal to a table for at least thirty persons, often sells for 500 sicca rupees, equal to £65.; and 'short sets' in proportion. The disadvantage attendant upon the use of this ware, in so remote a situation, is, that, when, owing to the numerous accidents to which all such articles are subject, even under especial vigilance, but particularly under the auspices of native menials, the set may be much reduced, it is utterly im-

practicable to fill up the vacancies thus occasioned. With china ware, it is very different; for it is not so easy to distinguish between two complex patterns, if tolerably similar; and, as there is always a very large stock on hand, among the retailers in the *china-bazar*, a very great chance, if not a certainty, exists, of being furnished with any number of plates, dishes, &c., that may be required to restore the set to its complement, or even to augment it, if necessary. It may be a proper precaution, however, not to buy a set of china ware of any very particular pattern; but to select one from those numerous rich patterns every where common, and annually imported. This seems to prove, that, unless under particular orders, the Chinese deviate but little from their established fashions; as may be further seen in their constant manufacture of that kind of crockery we generally term 'dragon-china,' which appears to have been in use among them for centuries.

A very expensive article of general consumption is wax-candle. The price of wax, some years back, was about sixteen rupees per maund, (equal to 6*d*. per lb.,) but, of late years, it has more than trebled, in consequence of the encreased demand. Here we see that want of system which too often tends to annihilate what might, under due regulation, be made a most advantageous concern. It is necessary to

be understood, that honey is of little value in India, the natives considering it unwholesome, and the Hindus being particularly averse to destroying so many lives, for the purpose of robbing their combs. These circumstances tend to diminish the collection of wax, which, in some districts, hangs for years neglected upon the briars in the jungles; and, added to the jealousy of the *zemindars*, (or land-holders,) who rarely omit to exact a very smart duty upon whatever is taken from their soil, deters those who possess a spirit of enterprize from becoming dealers in wax. I have not a doubt but that half a million of maunds might be annually collected, if proper encouragement were held out, and a sale insured to the adventurers, at any particular towns in the several districts where bees are abundant. Within the last twenty years, a few Europeans have established manufactories of wax-candles, which often sell for eighty rupees per maund (82lb). This, though an excessive price, compared with that formerly prevalent, comes to rather less than 2*s.* 6*d.* per lb.; and, as the wax is always pure, it should seem, that, as an article of commerce, much profit might be derived from importation. At present, wax-candles are prohibited, although the price of raw bees'-wax is here up to near 4*s.*, and tallow at a very exorbitant height. I am greatly mistaken, if the benefits this branch of business is capable of

yielding, both to the nation, and to individuals, are properly understood.

To place this in a proper point of view will require but little detail; for, if we say that wax candles, of the first quality, can be offered for sale at Calcutta for £13. per cwt., and that raw wax sells with us at 3*s.* 6*d.* per lb., or £19. 12*s.* per cwt., it is obvious that the manufactured article might be imported to us at full 50 per cent. cheaper than the raw material can be obtained on our own soil. Let us compute this on the large scale; comparing the manufactured articles, and making allowances for the fair value of the raw materials in either country.

	£
A ton of wax candles of Indian manufacture, even at the high price of 80 rupees (*i. e.* £10.) per maund of 82lb. would be . . .	260
Freight, shipping, charges, and insurance, per ton	25
Wharfage, &c., on landing, per ton	5
Total . .	290
A ton of wax candles of European manufacture, at £28. per cwt., equal to 5*s.* per lb. .	560
Difference in favor of the Indian candles, per ton	£270
Raw wax may be had at Calcutta for about forty rupees per maund, or rather under £7. per cwt. which brings the ton to	140
Freight, &c., as above	30
	170

Brought forward	170
Whereas, the raw wax produced in England generally sells for about 3s. 6d. per lb. or £19. 12s. per cwt., or, per ton	392
Giving a balance in favor of Indian wax, of, per ton	£222

I have not made any allowance for duties; but it will be seen from the above very simple calculation, that a very heavy impost might be laid on either the raw material, or the manufactured article, without reducing the profit so low as to leave no encouragement to the speculator. Let us, however, set it down at £60. per ton, which is an enormous sum, and say, that, in consequence of the great importation, wax should fall one-third in price. This fall would reduce the ton of candles to £380., from which deduct the £60. duty, and there would be left £320.; so that, after paying the £290. of cost and incidental charges, no less than £30. would remain as the net profit on each ton. If we, in like manner, take one third, say £132. from the £392. to result from the sale of the raw material, and £40. more for duties, we reduce the net profits from £222. to £50. In either way the speculation is highly interesting, and requires only to be thoroughly examined to insure attention. I am not, at this moment, prepared to say what may be the amount of duties collected on wax, or of the excise on the manufacture of candles, but

apprehend that it must fall very short of what might be realized if wax candles were more generally used in the houses of opulent persons. Some forty years ago, when wax candles sold for three shillings per pound, they were in great request. If, however, we calculate for the importation of 3,000 tons of wax annually, in its raw state, paying a duty of £40. per ton, we should find a result of no less than £120,000.

The foregoing estimate stands entirely on the present high prices of wax in India, but which might, by proper regulations, be reduced to one-third. Thus, if it were stipulated that the rents of certain districts should be payable, to a particular extent, in crude wax, at a fixed valuation, the quantity brought to market might, I am fully confident, be equal to what I have already stated, viz. 500,000 maunds, or 18,750 tons, which, taken at £200. only per ton, when landed, would give a national benefit equal to £3,750,000! and a revenue of £650,000, arising from the duty, at £40. per ton on the raw material!

When it is recollected how dependent we have been on other nations for a supply of tallow; and that, on an average of peace and war, we pay nearly £80. per ton for foreign tallow; also, that one wax candle of equal weight will burn out two of tallow; it should seem evident, that the importation of wax from our settlements abroad, as well as from various Indian islands,

in which it is abundantly produced, should become an object of national consideration. The very unpleasant scent attendant upon the use of tallow, and its great aptitude to gutter in so hot a climate, occasion its use to be confined to those Europeans whose circumstances may not permit them to use wax. This occasions all who return from India, after long residence there, to be extremely incommoded by the smell of mould candles; the smoke of which is, to them, peculiarly offensive, and strongly calls to mind the *cheraugs*, or oil-lamps, in common employ among the natives, and in the *zenanahs* of Europeans.

The whole of the doors and windows being thrown open, during the evenings especially, it would be impossible to prevent the current of air, passing through every part of the interior, from extinguishing the several lights, were it not that large glass covers, called shades, were applied by way of preventives. Some of these shades are made to stand on pillars, or pedestals, generally of wood, with brass ferules, and having broad plinths, either square or circular, to prevent their being easily overset.

The other kind of table-shade is by no means so convenient as that just described, it being an irregular tube, standing on its base, or broader extremity; and, though spreading in the centre, drawing narrower toward the upper part. This

kind requires to be much longer, so as to shelter the flame of a candle standing on a candlestick, which should not, properly, be more than six inches in height. The inconveniences by which this shade is attended are self-evident; as it cannot be carried about, or lifted, *in toto*, as the pedestal shade may be. Those lights which are affixed to the walls, either on sconces, or brackets, or that are suspended from hooks, are generally on the same principle; with this necessary difference, that oil is chiefly burnt in such, by means of a small glass tumbler half filled with water, on which the oil floats, and supports a very slight tin tube with four tin wings, to each of which a piece of cork is affixed. During the rainy season, when insects of every description are beyond credibility numerous, it is often absolutely necessary to remove all lights from the supper table; otherwise moths, flies, bugs, &c., would be attracted in such numbers as to extinguish them altogether, but, at all events, to prove extremely obnoxious. When the lights are retained on the table, it is customary to place the candlesticks in soup plates, &c., filled with water; by this means, such insects, especially the stinking-bugs, which fly with great force, are often precipitated and drowned: it is not unusual to catch whole platefuls in this manner; which would otherwise continue to torment the com-

pany. Nothing can exceed the irritation produced by these bugs when they get into the hair, or between the linen and the body! Nor are they in themselves innocent; for, though they neither bite nor sting, such is the acrimony they possess, that, if bruised in such manner as to leave any moisture on the skin, great heat, and sometimes blisters, followed by excoriations that do not quickly heal, may take place. The same effect is produced by the urine of lizards, which frequent the interior of houses, and may often be seen in great numbers crawling about the walls, or on the ceiling, (if we may so term the roofs already described,) in pursuit of the smaller and more delicate insects, which they snap up with great dexterity and greediness. It is really amusing to observe with what sagacity and care they approach their prey, and with what rapidity they dart forth their long tongues armed with gluten. With respect to frogs, toads, and, occasionally, snakes, patrolling about the skirts of the apartments, even of the best houses in the country, they must be put up with as matters of course; as must also the alighting of cock-roaches on the face while at table, or at cards, &c.: nor, indeed, must the resident in India be very squeamish in regard to bats, which freely indulge in aërial circuits over the heads of the company, on which, too, they now and then find it convenient to halt awhile, without un-

dergoing the previous ceremony of obtaining permission. These all appear terrible drawbacks, but are scarcely noticed after awhile; so strong is the power of habit. Certainly a very considerable portion of the enjoyments, which might otherwise be indulged in, are, in a manner, proscribed by these nuisances; but, whether it be owing to that *ennui* generally prevalent, or to that kind of reconciliation which takes place between the pest and its sufferer, may be difficult to determine; we, however, see all the old residents treat insects, frogs, toads, &c., with great indifference; though, to be sure, when a snake, of whatever class, makes his entrée, an astonishing degree of activity, far beyond what the former lethargic symptoms could indicate, suddenly prevails.

I have several times seen large snakes coiled, or rather twined, among the Venetians of *bungalow* windows, and have observed that the grass-snake, which is of a beautiful green, with a reddish head, is partial to secreting itself under the leaves of tables, and, in situations of that description, where it may be easily dislodged, or touched, by accident. Such a propensity is peculiarly obnoxious in a serpent whose bite is generally fatal. This snake may occasionally be seen twisted round the smaller boughs of trees, whence, if disturbed, it drops with great readiness, and proceeds along the tops of the grass

with admirable celerity, and, owing to the similarity of its color, scarcely allowing the dazzled eye to follow its course.

The *Conjoors* carry a great variety of serpents about the country, which they are in the habit of exhibiting to families for a mere trifle. Some, such as the *adjghur* or *boa-constrictor*, which has been known to reach the immense length of thirty feet, destroy by the extent of their bite, or by compression; while the lesser species seem to be provided with poison to make up for their deficiency of bulk. The skeleton of an *adjghur* was found near Chittagong, about forty years ago, having in its fauces the skeleton of a full-grown deer; the horns of which, it was supposed, had occasioned the suffocation of its unwieldy devourer. I have seen one of this kind that required eight men to lift him into his basket! An operation to which, either from habit, or fatigue, it submitted with great resignation. The *covra capella*, is the same as the hooded-snake of America, thus designated from a peculiar spreading of the throat when in a state of irritation, so as to give it much resemblance to a flounder, but with a curious figure extremely similar to a pair of spectacles, which, being under the throat, is fully exhibited as the snake rises, as he is wont to do, nearly half his length, before he darts upon the object of resentment. These snakes are peculiarly

venomous, and, though averaging from three to five feet, are seen to attain a larger size. I have shot four in one day, namely, two males, of a black, or deep bottle green; and two females, ordinarily of a clay color; which measured from six to nine feet. A few years ago, I saw one exhibited by the *Cunjoors*, or *Saumpareahs*, (*i. e.* snake-men,) which actually measured about thirteen feet! The *daumeen* grows to a large size, perhaps eight to twelve feet, but has no venomous teeth, or fangs. He lashes with his tail, coiling into a bow, and awaiting the approach of dogs, men, &c., before he lashes; which he does with such severity as often to cut the integuments very deeply. The natives entertain an opinion that the tail of this snake is venomous; and it might be supposed, from the almost certainly fatal effects produced by its operation, that it were so; but I have always attributed the mischief occasioned thereby, to that laceration produced by a very rough scaly body, such as the tail is, proceeding with great force over parts well known to be peculiarly irritable; occasioning a strong tendency to that most horrible affection the *tetanus*, or locked-jaw, from which not one in a thousand recovers. The *cowra manilla* rarely grows to more than fifteen or eighteen inches, and is of a mottled appearance, very indicative of its deleterious property: if I err not, its bite is invariably fatal.

The double-headed snake receives that name from its body being nearly cylindrical, the tail terminating in a short cone, resembling a second head. This snake is chiefly seen in hilly countries, but is occasionally washed down by the annual floods, to the plains, where it is found in drains and hollows, from which it does not appear to be over-well qualified to escape. Its average length may be from two to three feet, and its thickness, or circumference, from four to six inches.

It may be acceptable to my readers, while upon this subject, to be informed of the antidote; viz. the volatile alkali, or eau de luce. A few drops of this diluted sufficiently in a wine glass full of water, if taken in time, and repeated every two or three hours, or even more frequently, has been known to counteract the venom after its effects had been so fully ascertained as to leave but little chance of recovery. I never went out shooting without a small bottle of this, closed by a ground stopper, in my tin box of apparatus. Fortunately, although I have been repeatedly in imminent danger, and had snakes dancing the hayes all around me, no occasion ever presented itself for having recourse to my precautionary bottle!

The following extracts, from a very interesting communication made by W. Boag, Esq. to the Asiatic Society, will set this matter in a

proper form, and qualify any person to judge of the danger, from the several symptoms prevalent, in ordinary cases, when the venom takes effect. It may be proper to premise, that many who have been bitten by snakes of the worst description, have not been affected; merely owing to the thickness of their clothing, by which the noxious fluid has been absorbed.

Mr. Boag informs us, that "The symptoms which arise from the bite of a serpent, are, commonly, pain, swelling, and redness in the part bitten; great faintness, with sickness at stomach, and sometimes vomiting, succeed; the breath becomes short and laborious; the pulse low, quick, and interrupted; the wound, which was at first red, becomes livid, black, and gangrenous; the skin of the wounded limb, and sometimes of the whole body, assumes a yellowish hue; cold sweats and convulsions come on, and the patient sinks, sometimes in a few hours, but commonly at the end of two, three, or four days.

"This is the usual progress when the disease terminates fatally; but, happily, the patient will most commonly recover; a reflection which should moderate the fears of those who happen to be bitten by snakes, and which, at any rate, should, as much as possible, be resisted; as the depressing passion of fear will, in all cases, assist the operation of the poison.

'The volatile alkali is the remedy mostly employed by physicians, both in India and in Europe; but the belief which formerly prevailed, that it possessed some specific power, which corrected the poison, seems to be now very generally relinquished; and it is now acknowledged to have no other action than that ascribed to it by Mr. Williams, (of Benares,) of stimulating the vascular system to a more vigorous exertion.

'The calces, or, as they are more properly called, the oxyds of some metals, as arsenic, mercury, and silver, have been made use of; the efficacy of which, as remedies in this disease, merit a more attentive consideration.

'We are indebted to FONTAUA for any knowledge we possess regarding the use of the lunar-caustic; which is a preparation of silver in the nitrous acid; and, considering the length of time that has elapsed since his publication, and the advantages resulting from its use, it is wonderful it has not excited more general attention.

'He first mixed the venom with the lunar-caustic, applied this mixture to a wound, and found that the venom was rendered entirely innocent, while the corroding power of the caustic was diminished. He next wounded a variety of animals, with venomous teeth, scarified the wounds, and washed them with a solution of lunar-caustic in water: by this means,

the lives of the greatest number of the animals were saved, though they were such as he knew to be most easily killed by the poison, and the death of others was retarded. He also tried a weak solution, of the same remedy, internally, with remarkable success, and, upon the whole, he congratulates himself in seeing his labors at length rewarded, by the discovery of a true specific remedy for the bites of serpents.

'A ligature should, as soon as possible, be made above the part bitten, so as to impede, but not entirely to stop, the circulation of the blood; for the bite of a serpent is, for the most part, superficial, and the poison is carried into circulation by the smaller vessels on the surface; the wound should then be scarified, and washed in a solution (rather weak) of the lunar-caustic in water.'

Mr. Boag recommends a warm bath for the limb bitten, and thinks the addition of a small quantity of nitrous acid would produce excellent effects. He speaks of it only as a suggestion, and, where time may admit, and the means be at hand, there certainly ought to be a fair trial made of so promising a theory: the misfortune is, that, owing to the great heat of the climate, and the dread ever entertained of the result, all the symptoms proceed with rapidity. That gentleman speaks of several hours elapsing between the accident, and the fatal termination; but my

own experience satisfies me, that not one in ten of those bitten during the hot months, and especially when at work, or heated with travelling, &c., survive more than one hour: I have, indeed, seen various cases, in which half that time was the utmost; and could adduce some instances of persons dying within the *quarter* of an hour.

Though snakes certainly, for the most part, endeavor to avoid the human race, they have been known to come very fiercely to the attack. No doubt, when this has happened, some previous irritation has occurred, or they have been pursued by the ichneumon; (*i. e.* the *benjy*, *bissy*, or *neoule*,) which is to be seen wild in every part of India, and may, at times, be found contending with snakes of great bulk. This active little animal, the natural enemy of all serpents, as well as of the smaller kinds of vermin, worries his opponent by incessant feints, as though he were about to seize its throat, and, in time, so fatigues, as to render it unable to resist with its primary celerity and caution. When the snake is in that state, the ichneumon rushes forward, and, by seizing its throat, or the back of its head, soon lays the envenomed reptile lifeless at its command. It sometimes happens that the ichneumon receives a bite, when he immediately relinquishes his object, and seeks among the neighbouring verdure for some root, of which he eats, and, after rolling

himself in the soil, returns to the charge with unabated keenness. Should the snake have retired, the little quadruped speedily scents him out, and rarely fails to revenge himself for his past danger. What it is the animal has recourse to, never has been ascertained; of course, remains among our other important desiderata. The ichneumon is not only domesticated with facility, if obtained at an early age, but becomes extremely affectionate. Neither rats nor snakes will enter a house in which a tame ichneumon is retained, and allowed, as is usual, to range about at pleasure. The *Saumpareahs*, or snake-men, keep one, or more, for the purpose of exhibiting their feats in the attack of snakes.

It is wonderful how accurately a *Saumpareah* will ascertain, merely by smelling at a hole in a wall, &c., whether a snake be within. If such should be the case, the reptile's fate may be considered as decided; for, what with the music of a rude species of oboe, and the allurement of various drugs, in which *dunneah*, a species of coriander, among which snakes delight to bask, are prevalent, he soon comes forth, and is either taken in a bag, or by an assistant snatching hold of his tail with one hand, and sliding the other with great rapidity up to its throat; which, being constricted by the grasp, occasions the fangs to be exposed; these being extracted, the captive is added to the stock of innocents.

Though diminutive, in regard to corporeal extent, the musquito may be considered a most formidable enemy to the repose of almost every thing possessing animation, but especially to Europeans; whose manner of living generally gives a considerable tendency to general, as well as to local, inflammation. In this I speak relatively; for, when we compare the habits of our countrymen with those of the natives, we shall find that a very great difference prevails, and that, what we might in Europe call moderation, may, in Asia, very properly be construed into excess. This difference is so great, that, in ordinary cases, the physicians' first care is to lower the temperament of his British patient, thereby to repress the usual tendency towards inflammation; especially in persons of a plethoric habit, or lately arrived from Europe; while, on the contrary, it generally requires some effort to keep the frugal native from sinking under that *typhus* to which he is most subject.

Musquitoes generally remain inactive during the day, retiring to the borders of some muddy pool, or stinking drain, where they deposit their *ova*, which, in a few days, produce a noxious million, that may be seen in their several stages, at most times of the year, and especially during the hot season, when such puddles are often both replete with, and covered by, young musquitoes.

These unpleasant companions not only make a very disagreeable humming, but thrust their trunks, the same as the common knat does his proboscis, between the threads of a stocking, &c.; and, while sucking the blood of their victim, cause a very smarting sensation, which does not immediately cease; if scratched, a musquito-bite will usually rise into a small white, hard lump; which, on further provocation, proceeds to suppurate; frequently degenerating into very obstinate sores. Instances have occurred of very serious consequences being entailed, by an unguarded indulgence granted to the nails at the moment of irritation.

Every bed, (commonly called a *cot*,) is furnished with a set of inner curtains, made of gauze, manufactured for that purpose in several parts of Bengal, and known by the name of *koppradool*. These curtains, being very thin, and generally of a green color, serve not only to debar access to the musquitoes, but, without much obstruction to the air, offer a pleasant medium between the eye, and any glare which may either enter directly from the exterior, or be reflected by the walls; which, in most houses, are white, as already explained in describing the European architecture of the East.

It is always expedient to have these curtains put up before it is dark; otherwise musquitoes, being then on the wing, will, if possible, find

their way to the interior; whence it is not very easy to fan them out. Besides, by this easy precaution, it is not very practicable for snakes, or rats, to get under the pillows, or into the bed; situations in which they have occasionally been found. The rats are often induced to burrow into the pillows, which are usually stuffed with the silky-cotton called *seemul*, wherein the seeds are left, and, by their oily nature, attract this description of vermin in particular. The females sometimes resort to it when about to bring forth their young: hence, it is not uncommon to find the old lady in possession of a pillow, or bolster, or, eventually, of the mattress; especially if no person has slept on them for a few nights. On board *budjrows*, rats are often very troublesome, destroying boots, shoes, &c., without mercy: I have frequently felt them, during the night, attacking the powder and pomatum at the back of my head. Of this the cock-roach also is very fond, but the sensation it produces is nothing more than a tickling, as though the fingers of another person were introduced among the hair; whereas, a rat makes a more desperate attack, often giving a strong pull, or, occasionally, knawing at the accumulated grease, which adheres to the head itself. Though I made it a rule always to have my bed-cloaths stripped off, and my pillows turned over, before I got into bed, nothing of the serpent kind was ever

discovered, though many rats and mice were at times dislodged. Other persons have not been so fortunate; my own experience has made me acquainted with various instances of snakes being found in beds whereon gentlemen were about to repose. A very curious circumstance happened many years back, of a lady being called by her servant to see a snake that lay very contentedly between two of her infants, which slept on a small cot. It may be readily supposed their perilous situation produced the most dreadful anxiety. With great fortitude, and presence of mind, she directed the menial to go to one side of the bed, and to seize one of the children by a leg and an arm, while she did the same with the other; and thus to snatch them away. This was a bold measure, and possibly saved the little ones from injury; but, had the mother caused a chaffing dish to be brought into the apartment, and set thereon some milk to boil, the smell of it would instantly have caused the snake to creep out, for the purpose of partaking of his favorite food. Though all snakes are peculiarly fond of a certain warm temperature, inclining to summer heat, they will, in general, take to the water very freely, especially when pursued. Many persons pretend to distinguish such as are venomous, by their aversion thereto; but such is very fallacious. I have repeatedly seen *cobra capellas*

dart into puddles, and ponds, with seeming eagerness. It is extremely dangerous to proceed along path-ways, leading through grass covers, or *Jungles*, at night; as, at that time, numbers of snakes will quit the heavy grass for the purpose of lying in the current of air, which necessarily proceeds along those paths whose sides are confined, perhaps to the height of several feet, by grass and underwood, and cause them to resemble the vistas cut through coppices, &c.

From what has been said above, many may be led to suppose, that, in India, every step is attended with danger; and, that neither the day, nor the night, offers security. This certainly is not always the case; but I should strongly advise every person to act throughout with caution; and to suppose these dangers I have described to be imminent. This, though it may not be comfortable, will generally insure safety. With regard to scorpions, centipedes, &c., too much circumspection cannot be used. In some parts of the country they are very numerous, capable of inflicting great pain, and of producing very severe local inflammation. Instances have been known of serious indisposition having been induced by the stings of scorpions in particular. The young ones are generally of a yellowish, or dun, or clay color; as they advance in growth, they gradually become darker, until they acquire

a bottle color. Though very rare, I have seen a few of these which measured nearly eight inches from the mouth to the point of the sting, which much resembles a large dark-colored thorn from a rose-bush. There are, however, two kinds of scorpions, of which that species above described is certainly the most formidable; fortunately, it is seldom to be seen in places much frequented: the other kind may often be seen by dozens in the folds of a tent, &c., laid by in a dark place among old rubbish; and, not unfrequently, in the cracks of old mud walls. Many a poor servant, in walking about a house at night, or in rummaging among old stores, gets stung by the *beechu* (scorpion). The part affected generally swells, and smarts, or rather aches, considerably: but the remedy is easy; a rag moistened with vinegar affording speedy relief. The same application is equally proper in case of being bitten by a *centipede*, called by the natives *kaum-goojer*; from the opinion entertained that it is apt to creep into the ear. That such *may* have taken place, cannot be denied; but it would, I believe, prove extremely difficult to produce a well-authenticated instance. The centipede is by no means calculated for such an insinuation; he being of some breadth, and growing, rather quickly, to such a size as must preclude the *possibility* of his getting into the ear: I have seen several measuring nine and ten inches in

length; and as broad, though not above a third so thick, as a man's finger: we may consider half those dimensions to constitute the ordinary bulk.

Wasps and hornets are every where abundant during the whole year: the latter commonly nestle in the ground, or in the hollow of a tree, or perhaps form a small cell in some corner, or under a thatch, and there deposit their larvæ. The former are sometimes seen in such numbers as to occasion considerable uneasiness; they not only make their nests within the walls of *bungalows*, if, by means of cracks, or of distances between wood-work, they should find the opportunity, but boldly construct their combs within the apartments; sometimes attached to a cornice, but most generally in one of the upper corners of a window frame, so as to have ready means of retiring. The destruction of these intruders is not always practicable, without considerable danger. The best mode is to cover a man well up in a blanket, and to place on his head a pot of embers, on which a lump of sulphur is laid; so that, by standing under the comb, the fumes may stupify, or at least expel, the wasps; after which the comb may be removed without difficulty. The greatest danger is when the wasps take possession of some spot very near to the thatch; for instance, if they attach their dwelling to one of the rafters. When it is

considered, that half the thatches are extremely decayed, and take fire like tinder, it must be obvious how delicately the operation should be managed; in such case, a slow match, made to contain a large portion of sulphur, and fastened to the end of a pole, is, perhaps, the most secure device; for, if a single spark were to fly into the thatch, it probably would, like Doctor Slop's wig, be nearly consumed before it were well kindled!

Bees are by no means so bold as wasps and hornets, but they frequently take possession of some bush, or even of several parts of a hedge around a garden, especially one well stocked with flowers; rendering it unsafe to approach that quarter. The combs are sometimes large, but may, perhaps, on the average, when full, weigh from four to ten pounds. No bees are domesticated in India; at least I never heard of an apiary of any description; though, from the great abundance of food to be had at all seasons, it might prove very easy to maintain them properly. The truth is, that wild honey is so cheap and abundant as to preclude the necessity for taking any further pains to obtain it, than merely cutting the combs away from their thorny defences.

Bugs, such as infest our beds in Europe, are beyond imagination numerous throughout the East. Every *charpoy*, (or bedstead,) of what-

ever size, or description, in use among the natives, swarms with them! Hence, it is next to impossible to prevent their getting among the furniture, and especially into the boxes, drawers, &c., in which cloaths are kept; and the most careful, cleanly person, may sometimes find a stray bug crawling upon his linen, or lying concealed among the plaits. Musquito curtains are, on this account also, very useful; but they should be searched daily, lest any stragglers, &c., be on them. Perhaps the best defence against these nasty tormentors, is that in general use as a preventive against the visits of ants, centipedes, &c.; viz. causing the four posts of a bed to stand each upon a stone, perhaps a foot in diameter, and five or six inches deep, wherein a deep trough is cut, which, being kept full of water, insulates each post. Some use metal pans, which certainly have a neater appearance, and secure the carpet, mat, &c., from being injured by the damp; which sometimes will find its way, more or less, through stone, however hard.

The natives rarely have posts to their bedsteads; though a few, occasionally, affix a kind of tester, by means of a staple, at the head; those who could afford the best furniture, and every convenience, are more pleased when attended by a slave, or menial, who, with a small *punkah*, (or fan,) gently agitates the air, and

keeps off flies and musquitoes. It scarcely need be pointed out how offensive such a practice may occasionally prove, and that when the servant drops asleep while performing his tedious office, the master generally will be awaked. Some, of the natives especially, cannot go to sleep without being lulled thereto, by means of an operation called by Europeans *shampoing*. This consists in a gentle pressure of the feet and legs, as also of the arms and hand, or, occasionally, of the body also, between the hands of the operator, who passes either slowly, or rather rapidly, according to the fancy of his, or her, master, from one part to another. That considerable relief is obtained from *shampoing*, cannot be doubted; I have repeatedly been restored surprizingly from severe fatigue, as well as from a certain langor and watchfulness, common in hot climates, and no doubt proceeding from indigestion, or from a nervous affection, merely by having my feet gently pressed in this manner. It is curious, that Captain Cook should have found this custom to be prevalent in the Island of Tongataboo, where it is called '*toogey-toogey*,' in allusion to the beating of a drum with the fists. Now, the common small drums used in India, which are suspended in front of the body, are called '*doog-doogies*,' and, in some places, the natives of India, *shampo*, by beating with the fists, calling the operation, not by the

common term *debounah*, (or pressing,) but *doo-gannah*. It is a question whether the latter term be a corruption, or a derivative from the *doog-doogy*. A similar practice obtains in Egypt, and, indeed, throughout the Turkish empire; especially at the baths, where *shampoing* is considered a matter of course. If my memory be correct, Captain Cook was relieved from a severe rheumatic complaint by an operation of this description: with this difference, that, in lieu of soothing pressure, the parts affected were not beat gently, but squeezed forcibly, between the hands. I have somewhere read, that *gouty* pains were in like manner removed; but should conclude, that such could only be flying pains; for the tenderness of parts locally attacked by the gout, could not, I apprehend, be invaded without subjecting the party to excruciating torture.

Setting apart the benefits which may occasionally be derived from *shampoing*, we may consider it as one of those luxuries which, like the *hookah*, the snuff-box, the brandy-bottle, &c., become so habitual as to plunge us into indescribable uneasiness whenever they may be out of our reach; of course, it is prudent to avoid being *shampoed*, except when a kind of restlessness, or watchfulness, is induced by excess, of any description. In such case, immediate relief is often of great importance; but it may be pro-

per, not to have recourse to the indulgence except on emergency, since its effects are gradually lessened by repetition, and the want of a menial to perform the operation may cause much irritation and disquietude.

The greatest attention is requisite to aërate every apartment in a proper manner daily; without that precaution, all the aids of *champoing*, of musquito-curtains, water-pots, bathing, &c., will be of little avail, as fevers and obstructions of the liver invariably follow, whenever the atmosphere within a chamber is allowed to become foul. I know not, indeed, any thing more weakening, or more destructive to the constitution, than sleeping in one that is deficient in point of ventilation: and to continue in such, after being, in any degree, indisposed, is little less than absolute insanity! Nothing will be found to contribute more to health than sleeping cool; adverting, at the same time, to the precautions already laid down, not to place the cot so that any forcible current of air should pass over it, lest perspiration be obstructed, and the worst consequences be induced. The winter months will often dictate the use of one, or perhaps two, good thick blankets; while the summer heats will cause the rejection of all bed-cloathing above the body: occasioning the general use of long drawers, which, for the most part, are made of thin silk, or of fine calico: some have them

made with feet, thereby effectually preventing musquitoes from biting in that quarter; but, to me, such were always extremely unpleasant.

During the hottest part of the year, many dispense with their shirts, but retain their *banians*, or under-shirts, the skirts of which are confined by the *long* drawers, which are usually fastened by a drawing cord of silk. *Early* rising is particularly to be recommended, for the purpose of taking exercise before breakfast. Among military persons this salutary practice is generally inculcated *malgré lui*; and, among *civilians*, ought to be so, by the additional motive of having the forenoon devoted to office attendance, or to whatever duties may demand notice.

The amusements offered to Europeans in India are by no means numerous, nor are they of any continuance; the climate, the localities, and the occupations, of all, rendering it impossible to partake of such variety, or in such comfort, as we enjoy in Europe. Calcutta can boast of a very tolerable theatre, centrically situated, and spacious enough to contain as many spectators as are generally to be found within the town. This was built about fifty years ago, by subscription, in shares of one thousand rupees each; but, owing to the very heavy expences incurred in getting up plays, which formerly depended entirely on the *penchant* of gentlemen, who per-

formed all the characters, both male and female, the debts became so very heavy, that the concern fell into disrepute, and the shares were sold for half their original value.

It may seem strange, that, while no performers of any description were employed, the house should get into debt; and, that since hirelings have been engaged, it should have been in a more flourishing state. The enigma is, however, easy of solution. Gentlemen of property, fashion, and consequence, were not easily controlled; they would have new dresses for every character, and were to be kept in humour by good suppers after each rehearsal, some tickets for their friends, &c., &c., &c.; so that, when all was reckoned up, the receipts were invariably less than the disbursements. It is true that a gold-mohur (2 guineas) was the price of a box admission, that the pit was half a mohur, and the gallery a quarter of a mohur; but the house was rarely full, and there were rarely more than ten pieces performed during the whole year, and those generally in December, January, and February. The house had cost a lac of rupees (*i. e.* 100,000, equal to £12,500.) in building, and fitting up; therefore, there was a constant demand for interest, *at twelve per cent*, equal to £1,500. yearly; that, however, was commuted into silver tickets, which necessarily

diminished the receipts; causing the shares to sink from money speculations into mere family conveniences.

The heavy incumbrances brought on by the above inconsiderate measures, occasioned a necessity for letting out the theatre to any person who would conduct the amusements in such manner as might prevent matters from growing worse. This accordingly was done, and a spirit of enterprize was created in the manager thus appointed by a majority of the proprietors, whereby a great encrease took place in the performances, which became chiefly dependant on professional persons engaged at liberal salaries; while, at the same time, few gentlemen in the Company's service contributed the aid of their talents. This secession was occasioned by the marked displeasure evinced by Marquis Cornwallis towards all who took parts in the drama: it threatened to close the doors of the theatre. A competition arising about the same time, produced an effect which accidentally sustained the speculation, by causing an interest, indeed, a spirited party, to be formed, in favor of the old house, which, in a very short time, triumphed, and caused the opposition to give up.

With respect to the merits of the gentlemen performers, much may be said: there certainly were among them some who might have

appeared before a London audience without any fear of disapprobation. The names of Fleetwood, Messink, Norfor, Golding, Bigger, Call, Keasberry, Robinson, &c., &c., will long be remembered by the lovers of the drama; nor will they be easily effaced from the memory of those in whose hearts their merits, as members of society, were deeply impressed. The scenery was originally furnished from England, under the auspices of Garrick, who sent out Mr. Messink for the purpose of regulating the theatre at its out-set. Since that time, various additions have been made by different artists of acknowledged ability, among whom, Mr. Battle may be noticed as possessing superior talents, both in that important branch, and in the representation of various interesting characters. It is, however, to be expected, that, notwithstanding the great encrease of the European population, by whom it is almost wholly supported, the theatre must be sold off. This, though a severe privation, where every item in the catalogue of public amusements is highly appreciated, will not fall heavy on the proprietors. The facility with which the edifice might be converted into a superb suite of offices, or into a magnificent dwelling, would insure them the re-payment of their money; especially as the quantity of land reserved around it, for the accommodation of *palanquins*, &c., is extremely valuable: indeed, that alone must be

worth half the aggregate amount of the shares at their ordinary value; which has generally been about forty or fifty per cent. under par.

The temporary theatres that have at various times been erected at the several military stations, have always offered considerable gratification to their several audiences. In these cheap 'epitomes of Roman greatness' many a good play has been performed in an excellent style, such as put us in mind of the mother-country, and occasioned many a comparison by no means derogatory to the Asiatic boards. Exclusive of the exertions of those officers who indulged themselves in this recreation, many of the non-commissioned and privates of the European regiments contributed richly to the catalogue of histrionic characters. Some, though perhaps not gifted with grace, nor enriched by erudition, nevertheless displayed an accurate discrimination of the authors' intentions, and commanded the applause of their audiences; among whom, a very large portion were competent judges of dramatic excellence.

The Calcutta race-course is situate about a mile and a half to the southward of the town; it is by no means duly preserved, being occasionally much injured by the carriages of gentlemen who frequent it as a ride. It is true there is a clerk of the course; but he has no power to enforce the observance of the rules laid down by

the Jockey Club: he cannot, in fact, prevent the course from being miserably defaced, and cut up; nor can he, even when the horses are running, keep it clear from obstructions. This evil arises from a want of disposition in the majority of those who frequent the place, to join in the sport, or even to encourage them; hence, a want of courtesy is prevalent, and the horses run under great disadvantages. It may be said, that as they run only during the cold months, when the turf is tolerably firm, little injury is done by the carriages which travel over it; but, in answer to this, it may be urged, that a rut, or track, made at that time, speedily hardens, and becomes dangerous both to the horses and to their riders. But, where few are interested, few will be considerate.

Many horses that have started at Calcutta would make no contemptible figure even at Newmarket: according to the distance, and the time in which the course has been run over, I have reason to believe, that a few, which could be mentioned, might competite with the best of the second class of British racers. Taking into consideration, that such are entirely the result of chance purchases, and not from any care in breeding, it may be fairly argued that the horses of India, by which I mean those brought from Candahar, Lahore, the Mahrattah states, &c., possess considerable speed. Many, indeed, of

that small indigenous breed, which is usually held in contempt, especially on the turf, have displayed very great powers, and distanced horses not only of considerable value, but of high reputation. The race-grounds in other parts of the country are not better preserved than that at the Presidency; however, there is ample room for toleration, both because there are few horses kept for running; the races, in those quarters, being merely desultory, and the course generally marked out, *pro tempore*, from some uncultivated spot; which, having a tolerable surface, may answer the purpose of amusement for two or three days at Christmas.

Though there are *tattoo* (i. e. poney) races, at Calcutta, few of that class are brought forward, except after very full proof of their qualifications: in fact, the poney-races are often superior to those run by the best cattle on the clerk's register. At the out-stations, matches, or sweepstakes, are made solely with the view to merriment, or from whim, frolic, or periodical elevation after a hearty regale. Here we see cause for mirth, and, not unfrequently, find a clumsy-looking beast, with heavy heels, and a head like a yam, taking the lead of 'trim-built wherries,' that seem to challenge competition. I recollect a curious instance of this: a very

shabby, heavy-looking *tattoo*, belonging to Captain Cæsar Jones, started in this adventitious manner, and, to the surprize of all, fairly distanced several celebrated steeds. He was sent to Calcutta, where his uncouth appearance caused him to be ridiculed, but there was no standing against his speed and bottom. Hence, he acquired the name of 'TAKE-IN;' a designation which the knowing ones feelingly acknowledged to be highly appropriate! The spirit for betting at races does not run very high in India; though there have existed some characters who devoted their whole attention to this species of gambling: but so little encouragement offers for speculations on the turf, that, with the exception of a few fat *pigeons*, it may be said no money has been made by racing: the wagers rarely exceed a few gold-mohurs. Every horse becoming so thoroughly known to all the sporting community, little opening is left for deception or contrivance. The smallest indication of collusion would, in that quarter, prove instantly fatal to reputation, and cause at least a shyness, if not an absolute estrangement, on the part of society, towards the offending individual. In Europe this would not be so much felt, because a man may change his quarters, and, for a long time, screen himself from public, or general disapprobation; but, in India, when an individual is *cut*

at one station, he will rarely experience common civility at any other; his character generally preceding him by many a day's journey!

Gambling was formerly one of the most prominent vices to be seen in Calcutta; but of late years has considerably diminished. Those who recollect the institution of Selby's Club, and who now contemplate the very small portion of time dissipated, even by the younger classes, at cards, &c., by way of 'profit and loss,' cannot but approve the salutary reform introduced by Marquis Cornwallis, who, whatever may have been his foibles, his prejudices, and his errors, in other matters, certainly was entitled to the approbation of the Company, as well as to the gratitude of their servants, for having checked so effectually a certain licentious spirit, which had, till his arrival, been totally uncontrolled, indeed, unnoticed, in any shape, by his predecessors.

To expect that any Governor should be able totally to annihilate every bad practice, would be to consider him as vested with supernatural powers; but, it is assuredly within the reach of every person bearing that high office, to chace the abandoned into their secret recesses, and to render them at least timid, if not innocent. By removing such characters from office, and by persevering in resolution not to give employ-

ments of emolument to any but the most assiduous, and correct, of the Company's servants, much may be, much has been, done. Common sense points out the impropriety of allowing a gambler to occupy any office in which either great trust, or particular application, and vigilance, might be requisite; therefore, as the generality of the posts held under the Company are of either one or other of these descriptions, or may perhaps blend both, it stands to reason that a man whose brains are ever casting the dice, and whose carriage rolls upon the four aces, never can with safety be trusted.

Those who are partial to cards, as an amusement, may find abundance of parties during the evenings, where, for the most part, tradrille and whist (the favorite games) are played at such low stakes as not to be productive of regret, or inconvenience. Quadrille is barely known in India, nor are what we term 'round-games' much in use: cribbage is played in some families, and, occasionally, loo. In all the above games, the European inhabitants of Calcutta, as well as those dispersed over the country, are generally proficient; far more so than we find persons of the same description among us: a large portion are well acquainted with chess, and back-gammon; and many excellent players at fives, billiards, &c., are to be found in every

quarter. Cricket is not much in vogue; being confined principally to a club at Calcutta, and to some occasional Christmas matches at the several army stations. On the whole, though far less violent, as an exercise, than fives, it is less adapted to the climate; the alternate successions of exertion, and of inactivity, rendering the players liable to severe colds, and to consequent obstructions.

Music, it might be thought, would prove a great source of gratification in a country where *ennui* is so much to be dreaded; but the climate is unfavorable to instruments of every kind, especially to pianos, and offers a most formidable bar to the indulgence of a musical ear. No persons can be more liberal in their purchases of instruments, or of select music, than the ladies of India; they often giving two hundred pounds for a good grand-piano; but the incessant apprehension of warps, and cracks, is a tremendous draw-back on the interest they feel in the possession of even the best of its kind. Repairs, of every sort, whether of violins, pianos, flutes, &c., are exorbitantly dear, and, even at Calcutta, not always practicable; either owing to dissipation, the want of some essential article, or the quantity of work in hand. Nor is it easy to obtain the temporary accommodation of an instrument while one is repairing,

unless at such a rate as utterly precludes all of moderate income from availing themselves of such an opportunity, when it may chance to offer.

With respect to what is called 'preparing an instrument for the climate,' much may certainly be done, by taking care that only the best seasoned wood is employed, and by clamping the case with metal, both within and without; but all this has little connection with the belly, or sounding-board; which cannot be much strengthened without considerably deteriorating the tone, and causing a piano to be in the first instance condemned, for want of that richness which cannot be given to one whose vibrations are obstructed. The only chance is, to keep a piano well covered with blankets during the heats, as also in very damp weather, and to uncloathe it gradually, when about to be opened for performance. By such precautions, the instrument may remain tolerably in tune, and not sustain much injury from the variations of seasons: after two or three years the danger may be less; but it will be prudent never to relax in point of prevention, lest the instrument should suddenly fail.

With the exception of such little parties as, in a few families, assemble during the afternoons to enjoy the pleasures arising from the musical

talents of some lady, Calcutta has little to offer in this captivating branch of amusement. If we cast out of the account some accidental quartetto parties, or the solitary warblings of some flute-player, &c., the whole may be deemed a blank. Now and then a subscription concert, *for* the benefit of some professor, who lives more by means of eleemosynary bounty, than by the encouragement of his abilities, calls the town together, not to listen to the notes, to the fine melodies, and rich harmonics of Haydn, &c., but to see, and to be seen, and to talk, and be talked to. In brief, India is not the soil to which a man of science, or of taste, should repair, under the hope of being liberally repaid for his trouble and expences; much less of being cherished for his genius and acquirements. One or two insulated exceptions are not to be adduced in refutation of my assertion: I am ready to acknowledge, that, now and then, a professor has been seen pampering under all the influence of high and boundless patronage; but the *per contra* shews a numerous list of those who have lingered through all the penalties attendant upon humble merit, until the grave has kindly terminated their ill-fated labors.

Assemblies, balls, routs, &c., or under whatever name dissipation, vanity, and luxury, may arrange their concordance, are not very nume-

rous in India. The Governor-General, and the Members of Council, occasionally circulate their invitations during the cold months; and, at times, some spacious public rooms are engaged for the same purpose on speculation; but I never understood that it proved lucrative.

It was not until about twenty years back that the British had any regular church in Bengal, and now they have but one, which was built partly by private aid, and partly by the profits arising—*from a lottery!!!* The latter was, I understand, very forcibly opposed by one or two gentlemen, who considered it as a very unbecoming mode of raising supplies for so holy a purpose. When we reflect that a Portugueze merchant built one, for the use of the Catholics, from his own purse; and that, though he was accounted a rich man, yet his property could not be compared with what various individuals, of our own nation, resident in India, can boast; it may be fairly quoted as a singular instance of parsimony against our countrymen. Not that impiety or disrespect to public worship can be urged against the settlement; for no church can be better attended than that in question: the liberality of the inhabitants was partially exemplified by the institution of a free-school, where a number of children, both of Europeans, and of native mothers, are educated in a very sufficient

manner; a circumstance of considerable moment where education is so dear.

This dearness should seem unreasonable, if we only take into account the prices of provisions, which are very low; but we must carry in mind the enormous rates of house-rent; and that, whatever may be the profession in which persons proceeding to India engage, the return to Europe with a comfortable independence is the main consideration. Supposing ten thousand pounds to be gained in twenty years, by attention to his pupils, it cannot be denied, that a pedagogue is barely rewarded for so great a duration of slavery in such a climate, and at such a distance from all his friends and connections. Whatever may be the merits of the teachers, nothing could reconcile me to bringing up a child in India. All so educated, are rendered unfit for the society of gentlemen who have been brought up in Europe; they know nothing of the world, but, while imitating the manners and customs of those they term their countrymen, exercise all that craft which so peculiarly characterizes the native youths. In a moral point of view, the detention of a child, particularly a female, in India, is highly culpable; and when treated of as a matter of economy, will, in the end, be found equally objectionable. That the disadvantage under which pa-

rents labor, in sending their children to Europe, is considerable, must be fully admitted; and, it must also be acknowledged, that many may be able to spare a certain monthly, or annual, sum towards education, which could not be furnished at once. Such parents are to be pitied; because they can rarely have a child creditably schooled at Calcutta for less than fifty rupees (£75.) per mensem, all charges included; whereas, for about half that sum, say for £40., a much better education could be given at excellent schools in various parts of Britain. If we suppose £150. to be expended in transmitting a child to Europe, and that the sum of £35. be annually saved after arrival here, the difference, both principal and interest, would be cleared off in about five years; while many important advantages would be gained, and a thousand very obnoxious habits avoided. The encrease of population has been followed by an augmentation in the number of schools; but, if I judge correctly, the latter has been rather beyond what the former should appear to authorize. The first school that was set up in the vicinity of Calcutta, started about the year 1780, under the charge of a Mrs. Hodges, who succeeded beyond the expectations of her most sanguine patrons; and, in the course of about twenty years, realized a very handsome fortune, with great cre-

dit to herself; and, if marrying off at an early age be desirable, with great advantage to numerous young ladies; who, in succession, entrapped the hearts of sundry gay Lotharios, by whom her dancing-room was much frequented. It would be cruel, and unjust, in the extreme, to assert that young women brought up at such a seminary, were, in every respect, inferior: it must be admitted, that they may dance, play the piano, work at their needle, read, write, and cast accounts, and perhaps speak French: all these may be done to admiration; but, alas! these are, properly speaking, merely mechanical, and, though they may please for awhile, never can give that zest depending solely on the enlargement of the mind, and on some knowledge of the world. So true is this, that not one in fifty of the girls thus brought up can hold conversation in any way pleasing or interesting; and, which is worse, the other forty-nine are very apt to be childish, vain, imperious, crafty, vulgar, and—wanton! But they are, generally, well formed, pretty, active, gay, and insinuating; therefore we must not wonder at the matches we see take place, nor at the poverty they generally entail upon their husbands, by a certain prolific propensity which may be said to characterize the whole breed.

The several schools in and about Calcutta,

may be considered on nearly the same footing as in Europe; some dear, others more reasonable; some good, others highly exceptionable. Most of them are well situated, so far as relates to convenience and salubrity; but it appears to me, that more than one of the seminaries for young ladies are subject to overlook objects by no means suited to female delicacy, and, in a great measure, derogatory to the judgment of those who selected such sites for their establishments. Those academies which are about two or there miles out of town, are certainly preferable in the above respect; while, at the same time, they are not beyond the common distance to which bearers are in the habit of conveying their employers on visits during the forenoon.

In a former part, I cursorily made mention of the old fort, in which stood the Black-Hole, so famous in history. This fortress is now converted into public-offices and warehouses, for both which purposes it is admirably adapted, from the centrical situation it occupies, and from the great solidity of the walls, &c. The defences are extremely simple, and might answer well enough for the times in which they were constructed, as well as for the prowess of the troops by which they were likely to be attacked: being on the bank of the river Hoogly, a retreat by water might easily be effected under the cover

of shipping; and, by the same means, supplies could generally be afforded. According to the present system of warfare, and the probability of being attacked by an European army, it would be unsafe to place the smallest reliance on the old fort, further than as an immediate asylum in the event of insurrection; in which case, many houses that now command the works must be destroyed: this, owing to the want of cannon on the ramparts, would not be an easy operation. The town is protected chiefly by Fort-William, a more modern work, capable of containing at least fifteen thousand men; the defences, indeed, require near ten thousand to man them properly. The garrison ordinarily consists of two or three regiments of Europeans, a battalion of artillery, with a very large establishment of artificers, &c., attached to the arsenal, where stores of every description are lodged in bomb-proofs. Provisions, equal to six months' consumption, are always kept in the fort. The native corps, intended to aid in the defence, and of which the amount may be from four to five thousand, are cantoned at Barrackpore, a station about sixteen miles from Calcutta, on the banks of the river, and exactly facing the Danish town of Serampore. Of these troops, about twelve hundred constantly do duty in the fort; being relieved monthly in regular rotation. Fort-

William is the grand depôt of Bengal, and may be considered as the key to that part of the Company's possessions, if not to the whole; for it does not appear probable that any effectual resistance could be made, if that fortress were to fall into the hands of the enemy. Such a loss would infallibly destroy the opinion now held of our prowess, and precipitate us from the pinnacle of power, into an awful abyss of ruin!

As Mr. Hastings very properly stated, 'our power in the East depends entirely *on opinion*.' When we consider the immense population over which we hold control, with comparatively an insignificant force, and, that that force is composed chiefly of natives, it must immediately occur to us how necessary it is to satisfy our Asiatic subjects that our sway is mild, and that, in submitting to us, they rescue themselves from tyranny and extortion.

There may arise local circumstances wherein the possession of a strong hold would be invaluable; and rescue us from the most imminent dangers. Of this, our affair with Cheyt Sing is a most obvious and undeniable proof: had not the fortress of Chunar, a place rather of reputed, than of real, strength, been at hand, our force in that part must have been annihilated; when the insurrection would infallibly have spread in every direction.

Without entering into particulars, I shall give a brief statement of the Company's forces at their several presidencies; observing, that the number of their European regiments has been considerably diminished, amounting, nearly, to a total reduction, for the purpose of making way for the introduction of king's troops. With respect to the European strength, therefore, it must be understood that no fixed establishment exists: but the average amount of that branch, independent of the Company's battalions of artillery and infantry, may be taken at about sixteen or eighteen thousand firelocks, including the cavalry.

Presidencies.	Cavalry Native Regiments.	Infantry Native Regiments.	Artillery Battalions European.	Infantry Battalion European.	Marine Battalions Native.
Bengal . .	8	27	3	1	0
Madras . .	8	25	2	1	0
Bombay . .	0	9	1	1	1

At each presidency, the native regiments are formed into two battalions, with the same strength of European commissioned officers as are allotted to one regiment of Europeans. A colonel commands each regiment, and every battalion has attached to it one lieutenant-colonel, and one major, together with a proportion of the

captains and subaltern officers. Two serjeants are allowed to each battalion, viz. one acting as serjeant-major, the other under the quarter-master. The companies are commanded by European officers, under whom, one *soubadar*, one *jemmadar*, five *havildars*, five *naicks*, and ninety privates, *(sepoys,)* are enrolled. The *soubadars* and *jemmadars* have commissions, and are competent to sit on regimental, or line, courts-martial for the trial of natives, whether in the military service, or camp followers. The *havildars* correspond in rank and duties with our serjeants, and the *naicks* with our corporals. Each battalion has two grenadier, and eight battalion companies: no recruit is taken whose age exceeds twenty-five, or whose stature does not reach to five feet six inches and a half, or, more generally, to five feet seven inches; unless on emergency, or when obvious juvenility warrants the acceptance of an under-sized candidate; who, generally, being well fed, and taught to stand erect, in the course of drilling over-tops the standard of admission.

Reference to the table of pay and allowances in the Directory, will prove useful to those who may proceed to India, and may serve to guide those who are not acquainted with the particulars of income in that quarter. The usual exchange is two shillings and sixpence per *sicca*

rupee, about five per cent. better than the *sonaut* rupee, which is the standard of military payments. In viewing the sum-total of an officer's pay, when reduced to English currency, which may be done with tolerable correctness at the above rate of eight rupees to the pound sterling, very considerable allowance must be made for the inevitable expences, &c., incident, not only to military men, but to all residing in India. This consideration will amount to a very plain, and correct, conclusion; viz. that though a subaltern officer may live on his pay, provided his out-set be duly allowed for, yet, that he must have more than ordinary luck, or possess a bent towards parsimony by no means to be envied, and rarely attaining its object, to enable his saving a few pounds within the year.

This is necessary to be well understood, and, when understood, ought to be ever carried in mind by those who expect a young man on his arrival, as a cadet, in India, to support himself without adventitious aids. That he may do so, by arranging a proper plan with others of his class, cannot be denied; but to effect this, not only all luxuries, but, what in India are considered the necessaries of life, must be relinquished. On receiving a commission, his allowances, of course, are considerably augmented, but, on the other hand, his expences will be ra-

ther greater; and this unavoidably, and exclusive of his equipment to join his corps.

Therefore, let no unreasonable expectations be entertained, merely from observing the gross sum of annual receipts; let not the parent, who can spare a moderate sum towards his son's comfort, deny it for the few first years after the latter may arrive in India. The best mode of effecting this, in a proper manner, is through some respectable agency-house, which should have the power to afford seasonable aids, under the injunction not to encourage, nor to tolerate, extravagance. Those sanguine ideas too often entertained by persons not in affluent circumstances, that their sons, brothers, &c., should remit to them, yearly, a portion of their pay, ought to be peremptorily suppressed; the illusion should be done away; otherwise, inconvenience at least, if not ruin, may be entailed!

To shew how folks, on this side the water, sometimes err, I shall relate an anecdote which may prove serviceable to many; the circumstance happened, within my own knowledge, to a brother subaltern with whom I was very intimate. He had, from the day of his admission to the service, formed the resolution of amassing a certain sum, which should be devoted to the comfort of three sisters he had left in Scotland, and who, he knew, would not,

in the meanwhile, be destitute of support. At the end of about his tenth year of service, his favorite object was effected, and he remitted to them no less than twelve hundred pounds, *i. e.* four hundreds to each, with a letter, expressing his satisfaction at being enabled to provide them the means of improving their diet, &c.; closing his brotherly epistle with the assurance, that, in so doing, he had surrendered his all; and that, as it was his intention thenceforward to lay by every spare rupee for the purpose of retiring from the service, they were to expect no further aid until his demise. The good souls were astonished at the receipt of so handsome a present, which they never had expected; they put their heads together, and, after many a pleasing *confab.*, in which expectation, rather than gratitude, doubtless was expressed, made up their minds to the full conviction that their brother was as rich as a Jew, and that there was no occasion for economy in future. They made their good fortune known, both by words, and by the encrease of their establishment, &c., &c.; and, for a year or more, made a very gay appearance on the strength of their brother's money; but, as that was rather 'of a perishable nature,' and because, as poor Richard says, 'going often to the meal-tub, but never putting in, will soon find the

bottom,' bills, and demands of various kinds, began to accumulate, and the ladies were reduced to considerable distress. In this awkward predicament, application was made to the agent through whom the payment had been paid in London; but he knew nothing whatever of their brother's concerns, nor could he venture to make them any advance upon the bills of exchange they proposed to give him. Reduced to the last extremity by their own imprudence, they wrote him a most extraordinary letter, which was submitted to my perusal, wherein, among other matters, they reproached him as having occasioned their distress '*by not having been punctual in the* ANNUAL REMITTANCE *he had led them to expect!*' The foregoing *fact*, I am thoroughly satisfied could be matched, if many family occurrences, of which the public do not hear, were exposed to view. The number of questions I have been obliged to answer, and the evident disappointments that have resulted from my candid exposition of the subjects in question, leave not a doubt in my mind, that the most preposterous expectations are often (as in the above instance) formed upon very slight grounds, or even without the smallest foundation.

According to the regulations, every man in the service ought to be paid monthly; but this

is not always done, even in times of peace, on account of the collections, *i. e.* the revenues, being received only at particular periods: if nothing particular should occur to occasion the monies being otherwise appropriated, the deputy pay-masters at the several stations receive notice, that the amount of pay, due to the troops attached thereto, may be received; otherwise, it sometimes happens that two, three, or more months, elapse without any such notice being given. It is inconceivable to what inconvenience such delays give birth! No regimental pay-master, no regimental agent, no certain means of obtaining a supply of cash, in general, exist. Consequently, recourse must be had to the native money-lenders, of whom I have already made honorable mention. When a notice arrives at the deputy pay-master's office, application is made by him for an escort, generally of a company of sepoys, under the command of an European officer, which proceeds to that civil station whence the supplies are to be derived. Sometimes, however, the escort is detained for many days, or even for weeks; this is usually owing to sudden calls for remittances having been received, when, of course, the escort had better wait for fresh receipts than return empty handed.

Payments are made in specie, generally in

silver; the *sicca* rupees of Lucknow, Benares, Patna, &c., being held as *sonauts*, in which the pay of the whole army is calculated. When much gold is received at a station, but especially at the Presidency, that coin is instantly depreciated, to the great loss of every military man. In some instances, payments are made to troops by means of bills of exchange, payable at short dates: this answers very well for small sums, in situations not authorizing the detachment of a party to escort from a considerable distance, provided the party on whom the bill is given be a responsible man, which is very generally the case; for, though we do sometimes hear of a *shroff* (*i. e.* native banker) stopping payment, very little apprehension need be entertained as to the punctuality of those on whom respectable firms draw, as they usually do, at fifty-one days.

This is done with the view to induce the party who is to receive the money, to discount with him who is to pay it; thus deriving to the drawer of the bill a double profit. It happens sometimes, as I once experienced, that some little pretended informality is not discovered until the bill becomes due, when it is generally returned to be rectified: by this device, an additional profit is exacted. I do not apply these cases to all the *shroffs*, but notice them as being

occasionally within the sphere of an European's disappointments, and to caution against a too hasty acceptance of bills from any *shroff* not established in character, as well as in property.

With respect to the recovery of sums advanced on bills of exchange, extreme difficulty very generally prevails. The bankrupt laws of Britain do not extend to her colonies, and, if they did, it could be to the several presidencies only; beyond their immediate sites, the several courts of judicature have no immediate authority over any but British subjects. About thirty years back, the Supreme Court at Calcutta made an attempt to extend its powers into the interior, and to take cognizance of civil matters between the native inhabitants, but they were personally opposed, and such serious consequences were apprehended, that the enterprize was relinquished, and the judges compelled to confine their operations to the letter of that act by which they had been sent to India.

Until within the last ten years, the troops in the upper provinces received an addition to their pay, under the name of 'double-full-batta,' originally given by the Nabob Vizier of Oude to the officers serving within his dominions, and by the Company to all who served beyond their own immediate possessions: this has, however,

been abrogated, and full-batta is now the highest pay given on any occasion. When the above allowance, *i. e.* double-full-batta, was in force, the upper provinces were considered preferable in point of emolument; but, on account of the great prices of liquors, and of all articles, excepting immediate table provision, in demand among European gentlemen, very little advantage was gained from the receipt of greater pay; except by those who proceeded upon a plan of determined economy, and retired from the great circle of society for the express purpose of living within certain bounds, whatever privations they might endure. Such persons necessarily acquired property in proportion to their receipts; an object of great importance where the legal interest is twelve per cent., and where abundance of government securities at ten per cent. have been generally for sale at par, or nearly so, in the money market. Under such favorable circumstances, the first saving was invaluable; it was sure to accumulate, and commonly was doubled in about seven years. Since the abolition of 'double-full-batta,' the Presidency is considered the best station, so many opportunities offering of making cheap purchases at the several daily auctions in Calcutta, only sixteen miles from the cantonments at Barrackpore. In a gig, the distance may be easily

ran in two hours, the road being remarkably good; in a *palanquin*, the journey may occupy about four hours, if a relay of bearers be posted at the half-way *bungalow*. During the rains, and especially when the tide serves, a well-manned *pulwar*, or a *paunchway*, or *dingy*, (small boats calculated for expedition,) may proceed from Barrackpore to Calcutta in little more than an hour; the return is rarely very quick, except during spring-tides in the dry-season, before the river rises. Care must be taken to start with the first of the tide, but not before the *baun*, or *bore*, has past.

Those who have seen the *bore* in the Medway, and in the Severn, will at once comprehend the dangers attendant upon that impetuous rush of the waters, which, in the Hoogly, begins near Fultah, about forty miles below Calcutta, and may be felt even so high as Nia-serai, full thirty-five miles above the capital. In a work entitled 'The Oriental Voyager,' by J. Johnson, Esq., Surgeon in the Royal Navy, at page 80, is the following passage. Speaking of the Ganges, he says, 'The tides in this river, particularly at full and change, are rapid beyond belief, forming what are called *boars*, or *bores*, when the stream seems tumbling down a steep descent, doing great mischief among the boats, by upsetting and running them over each other: ships themselves are

frequently dragged from their anchors, and dashed furiously against each other, at these periods. They attempt to account for these torrents, by saying they depend on the other small rivers, that open into the main one by bars; which, at a certain time of the tide, allow the waters to rush out, all at once, into the great stream, and thereby so much encrease its velocity!'

Where Mr. Johnson got his information about these bars, I know not; nor would it be possible, in my humble opinion, for any man to have disguised, or confused, the fact more completely than is done in the above paragraph: a circumstance which creates surprize, when we consider, that the volume in question contains many remarks, inducing us to expect the absence of so unphilosophical a description, and so erroneous a conception. The matter lies in a nutshell, as Mr. Johnson ought to have known: viz. Those rivers whose mouths are much expanded, and that, after a course of several miles, during which their banks are nearly parallel, suddenly contract, are subject to *bores;* that is, to an immense wave which heads the flood tide. This *bore*, which is described with justice as being very powerful, arises from the contraction of the channel; which, while it directs the great volume of water into a narrowed space, necessarily compels it to assume a greater height.

The successive flow drives on the leading wave, which gradually subsides as it becomes more distant from the propelling power. But the *bore* rarely, if ever, occupies the whole breadth of the stream; it ordinarily runs upon one side, until it comes to a bend, when it crosses over, and continues its action until another turn of the river causes it to cross again; and thus until its force is expended. The *bore* does not run under Calcutta, but along the opposite bank; it crosses at Chitpore, about four miles above the fort, and ranges with great violence past Barnagore, Duckensore, &c. Lesser rivers, whose mouths lie embayed; as is the case with the Medway, which branches from the Thames, and the Wye, that falls into the Severn, are subject to *bores*, in consequence of the tide taking such a course as throws the great body of water into them. In such small streams, the *bore* will generally be tremendous; because so great an expanse is suddenly thrown into so narrow a channel: hence, the bridge at Chepstow is necessarily raised to so great a height, and by floating made to yield to the tide's force.

I much fear Mr. Johnson was not very successful in his enquiries, nor over fastidious in his acceptance of vulgar errors; for, I observe, that at page 113, he has allowed himself to be egregiously duped regarding *Mannacolly Point*;

so called, from the village of *Mannacolly*, which formerly stood there. Mr. Johnson tells us a long story about a lady proceeding to India, and finding her husband a corpse at that place: whence, '*Melancholy Point.*' *!!!* I am well aware, that the same fable has been retailed to many others, who gaped for information; but that is no apology for its being upheld as matter of fact: had any respectable authority been consulted on the occasion, before the volume was committed to press, so palpable a traditional error would not have been offered to that public, among whom so many are equal to its refutation.

What Mr. Johnson states respecting the injuries done to ships by the *bore*, is at times verified, but they are rarely worthy of notice: if a vessel be properly secured, the *bore* will have little effect on her safety, though the swell may cause her to pitch rather deep for a while. During the rainy season there is no *bore*; which is to be accounted for by the tide being so weakened at its entrance into the narrows near Fultah, as not to be competent to form such a wave as precedes it at other seasons; but, in exchange for this, a violent eddy, and great agitation of the waters, takes place between Diamond-Harbour and that place. It has been several times my lot, when proceeding with the last of the tide from

Barrackpore to Calcutta, to meet the *bore*, generally near Chitpore; but, as its approach was indicated by the putting off of all the small craft from that shore, along which it invariably pursued its course, and to remain near which would be dangerous, my boat-men always followed the example, and kept along the centre; where, though we were tossed about famously, no danger existed. Once, indeed, in turning Sulky Point, in a sailing boat, I was obliged to dash through the *bore*, which I did not suppose to be so near, notwithstanding the *dingies*, &c., were putting out. The surf assuredly appeared awful, but we mounted over it, stem on, without difficulty, and speedily recovered from a certain pallid complexion which had insensibly crept over our countenances, as we approached the roaring waters. From what has been said, it must be evident that the *bore* travels at the same rate as the incipient spring-tide, the velocity of which is different in various parts, but may be taken at an average of full twenty miles within the hour. Notwithstanding this rapidity, vessels, such as *budjrows*, and other craft, intended for pleasure, or for burthen, ordinarily ride safe at anchor; sustaining no injury from the *bore*, though they may perhaps drag their anchors a few yards. But, to insure this security, care must be taken that the broadside should not

be exposed; else there will be great danger of over-setting: this danger is not unfrequent, owing to the *manjies* and *dandies* (boatmen) neglecting, especially during the night, to swing the stern round, either by means of a spring, or a small hawser, or by *luggies* (bamboo-poles); so that the vessel's head may meet the *bore* in its direct course.

Those who are anxious to make the best of their way, should not delay putting off until the tide may have fairly set in, but ought to be out in the stream just as the *bore* is ranging along the bank, so that they may receive the first impulse, which is prodigiously forcible, and endeavor, by the exertions of their boatmen, to keep up, as much as may be practicable, with the leading waters. It is wonderful how great a difference this sometimes makes in the start from Calcutta! Sometimes a *budjrow* may, by this precaution, reach beyond Bandel, and nearly to the ultimatum of the tide's way, after which, the current is invariably in opposition, at various rates, according to the season of the year. During the dry season, which includes from the end of October to the middle of June, though sometimes the rains are of greater duration, or set in earlier, the Hoogly river is nearly in a state of rest above Nia-serai; but, during the rains, and especially about August and September, not

only the beds of the rivers, but the country around, present a formidable body of water. Within the banks, the current may average from four to eight miles an hour, according to localities, but what is called 'the inundation,' rarely exceeds half a mile; and, I believe, never moves at a full mile within that time.

In this, due allowance must be made whether the waters are rising, or falling: in the former instance, they will become nearly stationary until they may overflow where nearest the sea, and thus obtain a vent; in the latter case, such parts as may be near to great rivers, then subsiding within their banks, must be greatly accelerated.

As the parched soil of Egypt is refreshed by the overflowing of the Nile, so do the waters of the Ganges, by their annual expansion and abundance, renew the fertility of many millions of acres, and restore the blessings of health to those industrious and peaceable peasantry inhabiting that flat country through which they majestically wind their course.

At Calcutta, and Dacca, each of which is about seventy miles from the sea, not only is the water unpalatable, from its saline impregnation, but even the sand, taken from the beds of the rivers, is found to retain so much moisture, notwithstanding the heat of the climate, as to disqualify it from mixture in the cements used for

building, but especially for making tarrases, known to us here under the designation of grist floors.

The great tank at Calcutta, which occupies a space of about ten acres, is not less than two hundred yards from the river. The soil is generally a rich sandy loam near the surface, but becomes rather looser, and inclinable to a fine gravel, after digging about ten feet. The tank may be sixty feet from the top of its banks, (which are level with the streets,) to its bottom; and the river is from four to seven fathoms deep opposite its site. We should conclude that such a distance would secure the waters of the tank from becoming brackish; but the soil favors the communication with the river, and, during the hot season, occasions the tank to be so strongly impregnated as to be unfit for either culinary purposes, or for washing. What is more remarkable, the wells in the different out-works of Fort-William, some of which are four or five hundred yards from the river, partake equally of the moisture: so much, indeed, as to have caused Government to be at a great expence in forming an immense reservoir, (to be filled, if required, by rain water,) occupying the whole of one of the bastions.

It should be here noticed, that, during the rainy season, the rivers are fill up to their banks,

and run with such force, often six or eight miles in the hour, as to occasion the tide to be little felt, either at Calcutta, or at Dacca; consequently, the whole of the water, both of the rivers, and of the tanks and wells, becomes fresh and pure. On the other hand, during the hot months, viz. March, April, May, and part of June, when, except during a north-wester, or squall incident to the season, not a drop of rain is to be expected, the waters are every where proportionably low; and, as the tides come up with extreme force, we must conclude the portion of sea-water to be very considerable. Such is the fact; for those who visit either Calcutta, or Dacca, at that season, and who drink even of the tank-water, are sure to feel its cathartic effects, and, eventually, to suffer under a very troublesome kind of itch. At Dacca, where the air is more saline, all visitors undergo the penance of a copious eruption: some of the old residents have a return of it every hot season; although they may be extremely careful never to touch river water, but, like the inhabitants of Calcutta, allot a spacious *godown* to the reception of immense jars of earthen ware, which, being placed side by side, in close rows, are successively filled by the *aub-dar*, or servant whose business is confined to the care, and to the cooling, of water for table expenditure. The water thus preserved is

caught in large vessels, placed under the several spouts that conduct it thereto, during heavy falls of rain; the quantity varies according to the consumption, but we may ordinarily compute that of a family at Calcutta to amount to full sixty or seventy hogsheads within the year. In the course of a few weeks, each vessel will be found to contain innumerable larvæ, occasioned by musquitoes, and other insects, and which would, in a certain time, taint the fluid. It is therefore customary to strain the whole so soon as the larvæ are discovered, and afterwards to plunge into each jar an immense mass of iron, made red-hot; whereby whatever animalculæ may have escaped through the strainer may be destroyed. This being done, some alum is dissolved in water, and a sufficient quantity put into each vessel to fine its contents. Some, and I think the practice should be more generally adopted, after the foregoing operations, sprinkle a quantity of very fine sand on the surface of the water in each jar; thereby giving, to whatever gross particles it may contain, a tendency to precipitation. It may, at first view, appear that, in the common course of society, gentlemen must be subject to partake of water which may not have been so scrupulously purified, and perhaps brought from some neighbouring tank, or from a river, impregnated by the influx of a brackish

tide. Such may, assuredly, be the case occasionally; but it will be found, on reference to what has been said of the duties of the *aub-dar*, or water-servant, that purified water is carried by a bearer, in a *bangy*, or perhaps in a *soorye*, or earthen jug, to the house at which his master is to dine. In camp, it is a very general custom for every guest's servant to supply his master with water of his own purifying; which is effected either by means of alum, or of some other astringent producing a similar effect.

The waters in the great rivers have various sources; but, speaking generally of the Ganges, which receives almost all the other rivers in its course from those mountains among which it has its source, to the Bay of Chittagong, where it empties itself into the sea in an immense expanse, we may divide its properties according to the countries through which it passes. Hence the various opinions that have been entertained of its qualities; which have been generally mentioned in a very loose, indiscriminate manner, without reference to the various soils whereby its purity must be affected, in a country where, as in Egypt, annual inundations prevail; or where, at least, such immense quantities of rain fall as would astonish a person not habituated to the most impetuous showers.

The Ganges takes its rise at the back of the

Kammow Hills, beyond Hurdwar, where it issues forth as a narrow, but rapid stream, from among broken rocks, and soon spreads to some extent in the fertile plains of the Rohilcund district, which it divides from the province of Delhi. The natives of India rarely venture beyond Hurdwar. They have, however, an opinion that the true *Ganga*, as they term the Ganges, originates at that spot; and, considering the cow as the greatest blessing given to mankind, (for the Hindus venerate it with even more fervor than a Catholic does a supposed relic of our Saviour,) emphatically term it 'the Cow's Mouth;' implying thereby the purity, as well as the value, of the waters.

But those mountains which give birth to the Ganges, are likewise the sources of the Barampooter; a river exceeding even the Ganges in capacity! These two immense streams deviate at their origin to opposite quarters; the Ganges proceeding westward, and the Barampooter eastward. The former, after winding at the back of the Kammow and Nagrocote Mountains, passes Hurdwar, and, proceeding in a devious track through the plains of Oude, Allahabad, Benares, Bahar, Jungleterry, Mauldah, Comercally, Dacca, and other subordinate districts, receives the Luckyah, as a branch from the Barampooter, and a few miles below Dacca

unites with that river; whence, under the designation of 'the MEGNA,' they pursue their course for about sixty miles to the eastern part of the Bay of Bengal, forming by their junction a volume of water, encreasing, from about seven, to twenty miles in width.

In the upper country, the Ganges receives various inferior streams, such as the Doojoorah, the Cally-Nuddy, the Goombeerah, the Gunduck, the Mahanuddy, the Rooee, the Jumma, the Goomty, the Carimnassa, the Gogra, (or Dewah,) the Soane, the Coosah, and various other streams not vying in extent with the Ganges, but generally equal to the Thames at London. The Gogra, the Soane, and the Coosah, are, indeed, rivers of the second class; as wide as the Thames at Gravesend.

From Sooty, which is in the Jungleterry district, the Ganges throws off a considerable branch: this widening in a curious manner, under the name of the Baug-Retty, passes Moorshadababad, formerly the seat of the government of Bengal, under Sooraja Dowlah, Meer Jaffiers, and their ancestors; at length, after a course of about 150 miles, it meets at Nuddeah, with the Jellinghy, also detached from the Ganges, whence the two form a large river under the name of the Hoogly, which, flowing under Hoogly, Bandel, Chinsurah, Chandernagore,

Serampore, Calcutta, and many inferior places, empties itself into the western end of the Bay of Bengal, having previously received the Roopnariam, and the Dummoodah.

In its course from Bagwangolah, which stands near to Sooty, the Ganges sends a great variety of small streams through the Jessore, and Mahomedpore districts, which, meeting with large inlets from the sea, form an immense labyrinth of deep waters, intersecting that wild country called the Sunderbunds, in such various mazes as to require a pilot for their navigation.

Having thus detailed the courses of the rivers, I shall account for their rise and fall; as thereon many physical points of the utmost importance will be found to depend: the various soils through which they pass will be described, and enable us to judge more correctly, of the causes of that variety of character attached to the waters in various parts.

The Thibet Mountains, which form the north-east boundary of a long valley, stretching from Napaul to Sirinaghur, are covered with snow all the year. Their height must be very great; for, on a clear day, they may be seen from the Golah at Patna, though distant little less than 300 miles. From the north-west part of this Alpine range, the Ganges and Barampooter derive their sources, as before described, back to back

from the same mountains. To the dissolution of a part of the snow which cloaths their summits, we may, perhaps, safely attribute a slight encrease that takes place about the middle of May in those rivers: fluctuating, more or less, at intervals, until the periodical rains set in; generally about the middle of June. Some have ascribed their rise to heavy rains in the countries through which the streams pass; but such cannot be considered as the true cause, for various reasons. Firstly, those rains must be extremely heavy if they tended to swell the rivers; the ground being parched, and requiring great moisture to saturate it. Secondly, the encrease is not attendant with any turbid appearance; as would indisputably result from such heavy rains, as, after saturating the thirsty soil, could raise such large rivers, often a foot, or more. Thirdly, there are other rivers which derive their sources from the Kammow Hills, and from the Morungs, not so distant from the Thibet Hills but that they might be expected to receive their share of the rains, and to shew some encrease, which they do not; the rise being confined to the Ganges and Barampooter, whose sources lie among the snow-clad mountains. Fourthly, the encrease happens at the hottest time of the year, and the water loses the genial warmth imparted by the solar ray, becomes harder, and, in the upper country, near Annopshier, about sixty

miles below the Cow's Mouth, is found, at that particular season, to cause acute bowel complaints, which is not the case at other seasons. Add to this, that, among the natives of the countries above Hurdwar, the *goiture*, or wen in the throat, in some measure prevails: a strong symptom of the dissolution of snow.

The following may, generally, be considered the soils peculiar to the several provinces through which the Ganges has its course, after leaving Hurdwar. The west bank is generally high all the way to Benares, and consists, with little exception, of lime, concreted into irregular masses, much like roots of ginger, or Jerusalem artichokes, of various sizes, some weighing perhaps five or six pounds, others scarcely an ounce. These are of a ginger, or ash color; though some, being more mixed with the gravelly part of the soil, are of a yellowish red. This kind of concretion is known throughout India by the name of *kunkur*, and, when burnt, yields a very inferior kind of cement, friable, and not very tenacious in regard to the body whereto it is applied, nor hardening so as to resist moisture effectually.

All the rivers, therefore, which issue from the western bank, are, more or less, impregnated with this kind of lime; while, on the opposite bank, the waters partake of a strong solution of nitre, with which most of the plains of Oude,

Fyzabad, Gazypore, &c., abound. Such is the abundance, that the Company are induced to prohibit the salt-petre manufactured in the Nabob Vizier of Oude's dominions, from being imported within their own provinces; otherwise, the cheapness of the former, which is usually sold at Furruckabad for about two shillings and sixpence per cwt.; would destroy the manufactories at Patna, where it ordinarily sells for double that price.

The country lying between the Ganges and the Goomty, (on the eastern bank,) from Currah to Benares, is replete with alkali in a fossile state, known by the name of *sudjy*. This is usually found on the surface, at the close of the rainy season especially, when it begins to shew itself very obviously, and is pared off with mattocks; rising in large cellular strata from one to three inches in thickness, and much resembling thin free-stone, though far more porous. In this state it is carried to market, where it is purchased by the manufacturers of soap at Allahabad, Patna, and other places; it is generally combined with oil, and, when ready, sells at about ten shillings the maund of 80lb. At Calcutta it is ordinarily sold at about 50 per cent. profit. It is made in baskets, is of a dark color, and very moist.

It is curious that the inhabitants of these countries have never turned their thoughts to

the effects produced by these substances. On the western bank the people are subject to nephritic complaints, which they generally express under the vague term of *kummer-ka-dook* (or pains in the back); while, on the eastern bank, they are troubled with the *moarmoory*, (or gripes,) with which those living inland, especially, are severely afflicted, owing to their use of tank-water.

During the rainy season, these powerful agents combine, and give birth to most alarming and excruciating maladies, which, however, readily yield to a few gentle cathartics, aided by *congee*, (or rice-water,) by which the intestines are sheathed. The natives generally have recourse to opiates; whereby they often fix the disease. In the dry season, that is, from the end of October to the middle of June, the river water, having deposited the noxious particles, is remarkably clear and wholesome; except when the rise takes place, about the middle or end of May, as before related. The bed of the river being invariably a coarse sand, occasionally blended with immense sheets of *kunkur*, whereof the banks are formed for miles in some parts, easily receives the lime and alkali, leaving the running waters clear, and free from those substances.

Europeans never drink of water fresh drawn in any situation; it being always left to stand

for at least one day; during which, a copious deposit takes place: in the rainy season, perhaps full a fourth of the contents of the vessel. Some gentlemen are very particular in having their water boiled.

The low plains of the Shawabad and Buxar districts, situate on the western bank of the Ganges, are chiefly cultivated with rice, while the higher parts are productive of white corn, opium, sugar, &c. The swamps near Saseram, bordering the range of hills at the western boundary, and which come round to Chunar, are annually in a state of partial corruption, sufficient to occasion terribly malignant diseases, about November; when the sun's power promotes an astonishing evaporation, filling the air with miasma, and spreading destruction among all the living tribes. But those waters are, in themselves, highly dangerous; both on account of the putrefaction of the vegetables they contain, and of the powerful coalition of various mineral streams, which, having in the rainy season exceeded their ordinary limits, stray into the low country, and mix with the already deleterious mass. Finding a discharge for their redundancy, by means of the multitude of fissures, or small channels, every where existing, these blend with the purer torrents, occasioned by the impetuous rains, and cause a fever to

prevail, which, in addition to the lime and nitre already afloat, perform wonders in the cause of desolation.

This assemblage of rivulets forms that great river the Soane, which, for the short course it has to run, not being more than sixty miles from its numerous sources in the hills before noticed, presents an uncommon expanse, being generally from three quarters of a mile to two miles in breadth; but, in the dry season, contracting its stream to a very narrow channel, winding in the most fanciful meanders, and causing, by its waters being so dispersed in a very flat bed, more quicksands than probably are to be found in any river in the world. It is worthy of remark here, that several rivers in that part of the world, which have sandy beds, appear suddenly to be lost; owing to sand banks, that, during the stream's violence, have been thrown up, so high as to be above the waters when the rains have subsided: the current continues very perceptible, but as the bar prevents the water from going forward, it passes through the intervals of the very coarse grit which forms that bar; and, perhaps, at the distance of half a mile lower, re-appears. The natives, who attribute every thing that can bear the perversion to some invisible agent, never fail to apply this as a curse upon any village that may be opposite to such a bar, under the opinion

that the waters ceased to run in its vicinity on account of some impiety, either known, or concealed, perpetrated by the inhabitants.

The Gogra, or Dewah, which takes its rise in the hills north of Gorackpore, dividing Napaul from the Company's possessions, rolls its impetuous course through a country nearly desolate, and bounding its banks with most extensive forests and wildernesses. The soil is not so impregnated with nitre as in other parts, nor are the streams that form its volume tainted so strongly with minerals. Perhaps owing to the length of its course, which may be about 250 miles, or more, the more weighty particles may be deposited; for it is held that this river contains less obnoxious mixture than any part of the Ganges. Of lime it may certainly partake, since it runs through some tracts abounding with *kunkur*; but its course is chiefly through clay, sand, and a species of black potters' marle, of which crockery is made in some parts of north Bahar, in imitation of our Staffordshire ware; though very inferior as to form and finish. For this, the neighbourhood of Sewan is famous.

The province of Bahar abounds in nitre; and every petty rivulet either takes its rise from some swamp strongly impregnated therewith, or passes through soils which yield it profusely. Those streams that originate in the Chittrah, Ramghur, Gyah, and Monghyr Hills, are often so very

highly saturated with deleterious substances, as to betray their bad qualities even to the eye. The Mahana, the Mutwallah, and various mountain rivers in that quarter, which rush into the Ganges between Patna and Boglepore, are frequently tinged with copper, of which some small veins are to be found. An instance occurred, while the 12th battalion of native infantry was marching from Patna to the Ramghur station, where the whole corps were so extremely affected by the water, as scarcely to be able to ascend from the camp, then at Dungaie, to the summit of the Kanachitty Pass; such was the state to which it had, by its cupreous solution, reduced both men and beasts. Fortunately, it was very cold weather, and the use made of the waters had been very limitted.

Some officers from the same corps being on a shooting party, during the next year, happened to encamp at Dungaie. The kettle had been put on; the water, indeed, was ready for breakfast; but the gentlemen, on alighting from their horses, as usual, had water brought them to wash; when the contraction it occasioned in their mouths instantly reminded them of their former escape, and thereby set them on their guard: on enquiring, they found, that, either from want of memory, or through indolence, their servants had taken the water from the rivulet running at the foot of the pass, in lieu of

drawing it from a well in the town, which was at no great distance.

Many such streams pour into the Ganges, either singly, or in conjunction with others. As to chalybeate influence, that cannot be wanting; for the whole range of hills, in the elevated parts of Ramghur, Rotas, Chittrah, Tomar, Pachete, Beerboom, Ragonautpore, Midnapore, &c., may be termed one mass of iron; lying in huge projections exposed to view, and giving the soil a strong rust color. The natives, in those parts, fuse immense quantities for sale.

The country from Benares to Patna is generally fertile in the extreme, abounding in rich plains, and affording far purer water than is to be found above that interval. At Gazypore and Buxar the waters receive no additional adulteration, except from the Caramnassa, which certainly is an impure stream. Such is the opinion held by the natives regarding this river, that, on account of its being necessary to cross it between Saseram and Benares, a road much frequented by pilgrims and devotees; particularly the immense hordes who repair from the Maharrattah country, to visit the holy Hindu city of *Kassi*, which is the name they give to Benares; that a rich man, residing so far off as Poonah, the capital of the Maharrattah empire, near Bombay, bequeathed a large sum of money for building a bridge, thereby to obviate

the necessity pious travellers were under of being carried over on the backs of men; who gained a livelihood by transporting those who, from over-nice scruples, would not wade through the stream, as they must have done through hundreds of others, before they got so near their holy object. Unhappily for those delicate gentry, the bridge did not, when I last saw it, about twelve years ago, seem likely to perform its office: the soil being sandy, and the architect understanding but little of his profession, piers had repeatedly been raised to about seven or eight feet high, but always gave way; so that I fear the poor itinerants must still pay their pence, and ride across as before; unless the edifice may be entrusted to European architects.

The Coosah comes down from the Morungs, a wild, mountainous country, replete with impenetrable forests, and containing some few minerals: however, on that head little is known; the extent of the wilds being such as to debar the possibility of exploring the supposed riches contained in the bosom of the mountains. From this quarter, and the continuance of the forest before described, which stretches eastward to Assam, and westward to Peelabeet, or further, the whole of the lower countries are supplied with *saul* and *sissoo* timbers, and some firs.

Such is the country in which the Coosah has its rise; quitting which, after a foaming course

of about forty miles, it enters the extensive plains of Purneah, through which it passes in a more tranquil state, though ever rapid, until it joins the Ganges a little below Colgong, which stands on the opposite bank, and where the Termahony, a small sluggish river of about eighty or a hundred yards in breadth, blends its waters with the great river. The Termahony is very deep, and, in the rainy season, equally impetuous. Like the Coosah, it flows chiefly through a flat country, during its short course, and as the soils in this part are sabulous, there does not appear any thing remarkable in the effects of the waters upon the inhabitants.

The Ganges may be considered as far more pure between Raje-Mahal, in the Jungleterry district, and Mauldah, or Bagwangolah, than for some distance above; during the dry season, it is remarkable for the clearness and lightness of its waters: after leaving this to proceed southward, we find them greatly changed during the rainy season, when the immense inundation which prevails throughout Bengal, properly so called, and which, moving in general at a rate not exceeding half a mile in the hour, may be considered as stagnant.

We now lose the great body of sand that in all the upper country forms the bed, not only of the Ganges, but of every river whose course continues uninterrupted during the dry season;

though its stream may become insignificant. Here it should be remarked, that sandy beds generally produce the finest beverage, and that the water will be found more pure in proportion as the sand is coarse. Hence, the waters in the deep parts of such streams are invariably the sweetest; for the coarse sand will naturally find its way to the greatest depths, precipitating the impurities with it. On the contrary, the light floating sands, which with every little motion become agitated, will set the impurities also in action. Such are generally found on the borders of the stream, whence most persons derive their supplies, and where it may usually be seen in an active state; or, if at rest, blended with slime, or fibrous substances.

We should ever remember the distinction between the effects of fine and of coarse sand as strainers. Coarse sand allows heavy, or coarse bodies, to pass through it freely, provided the particles be not adhesive, or too gross for filtration; consequently, when such sand is deposited in the bed of a river, the lesser particles of lime, or of minerals and their ores, will sink, and remain fixed. Not so with fine sand; which has a greater tendency to compactness, and which, gradually filling up the smallest intervals, becomes firm, and resists all admixture with heterogeneous substances; the latter must, of necessity, remain on their surface, subject to

be taken up with the water. Persons accustomed to filtration must know, that, owing to this tendency, fine sand is by far the best medium to filter *through*, while coarse sand is preferable for the purposes of *precipitation*.

The inundation which overflows Bengal, especially in the districts of Nattore, Dacca, Jessore, the southern parts of Rungpore, and a part of Mahomed-Shi, is, perhaps, one of the most curious of nature's phenomena! The wisdom of our Creator is most conspicuously shewn in the appropriation of sustenance, both for the human and for the brute species, suited to meet this annual visitation of the waters. However copious the rains may be in the southern provinces, though they might become boggy, and be partially inundated where the lands were low, yet, without the influx of these immense streams, which, owing to the declivity of the surface, pour down from the upper country, Bengal would, at such seasons, be but a miry plain, or a shallow morass. The great inundation does not, generally, take place till a month after the period when the rains have, according to the phrase in use, 'set in.' The thirsty soils of Oude, Corch, Allahabad, Benares, Gazypore, Patna, Rungpore, Boglepore, Purneah, and all beyond the 25th degree of latitude, require much moisture to saturate them, as do also those parched plains into which they

ultimately pour their streams, before any part of the soil can be covered. Indeed, such is the state of the southern provinces after the cold season, that that rich friable soil in which they abound is seen cake-dried and cracked by fissures of many inches in breadth, as though some great convulsion of nature had been exerted to rend the surface into innumerable divisions.

Under the circumstances of a flood, which lasts for many months, fluctuating from the middle or end of July to the beginning of October, (though the water does not drain off before the middle of December in low situations,) the inhabitants might be supposed to suffer under all the miseries of a general ruin and subsequent scarcity. The reverse is, however, the fact; for, provided the rains do not fall in such torrents as to wash away their habitations, and to occasion so rapid a rise in the fluid plain as to overwhelm the growing rice, the more ample the *bursauty*, (*i. e.* the rains,) the more plentiful the crop, and generally the less sickly does the season prove. The latter point will appear self-established, when we consider that amplitude of inundation serves, not only to divide the septic matter contained in the water, but likewise to accelerate its action, and cause its proceeding with added impetus to discharge itself into the bay. At this season, rivers are only known by the currents, and consequent swells, which ap-

pear amidst this temporary ocean! The navigation, for several months, assumes a new appearance. Vessels of great burthen, perhaps of two thousand maunds, (each 80lb.,) equal to nearly one hundred tons, are seen traversing the country in all directions, principally with the wind, which is then within a few points on either side of south. Noted cities, exalted mosques, and populous *gunjes*, or grain-markets, on the river's bank, are not objects of attention. The boatman having set his enormous square sail, proceeds by guess, or, perhaps, guided by experience, through the fields of rice, which every where raise their tasseled heads, seeming to invite the reaper to collect the precious grain. As to depth of water, there is generally from ten to thirty feet, in proportion as the country may be more or less elevated.

It is curious to sail among these insulated towns, which, at this season, appear almost level with the surrounding element, and hemmed in by their numerous *dingies*, or boats, which, exclusive of the necessity for preparing against an over-abundant inundation, are requisite for the purposes of cutting the *paddy:* rice being so called while in the husk.

So soon as what is considered the final secession of the inundation is about to commence, the whole of the boats are in motion, and the *paddy* is cut with astonishing celerity.

It is fortunate, that, owing to the country on the borders of the sea being higher than the inundated country, the waters cannot draw off faster than they can find vent, by means of the rivers which discharge into the Bay of Bengal, else the growing rice would be subjected to various fluctuations unsuited to its nature, and occasioning the straw to bend; whereby its growth would be injured, even if it should recover from its reclined state so as again to assume a vigorous appearance on the surface.

The waters of the inundation, it will be seen, are a mixture of all the streams flowing from every part of the extensive valley formed by the ranges of mountains stretching from Chittagong to Loll Dong, or Hurdwar, on the east and north-east, and from Midnapore to Lahore on the west and north-west, a course of not less than fifteen hundred miles, and generally from two to four miles in breadth. It may be supposed, that many impurities must be involved with these contributary streams, as particularized in the foregoing pages: to this we must add the offensive, and certainly not salutary, effect, induced by the Hindu custom of consigning every corpse to the waters of the Ganges, or of any stream flowing into it.

The Hindu religion requires that the deceased should be burnt *to ashes* on the borders of the Ganges, and that those ashes, with all

the remnants of wood used in the pile, should, together with the small truck bedstead on which the body was brought from the habitation to the river side, be wholly committed to the stream. The wholesomeness of such a practice, in a country where the strides of putrefaction know no bounds, infection and its effects being prodigiously extensive and rapid, cannot be disputed; such an ordinance may vie with the acts of any other legislature, however enlightened. But, either the poverty, the indolence, or the sordidness, of the people, has, in time, converted this wholesome precaution into a perfect nuisance. From fifty to a hundred bodies, in different stages of putrefaction, may be seen floating past any one spot within the course of the day. These having been placed on a scanty pile, and that not suffered to do its office, either o account of hot, cold, or wet, weather, have been pushed, by means of a bamboo pole, into the stream, to the great annoyance of water-travellers, and of all persons abiding near those eddies, where the nuisance may be kept circling for days, until forcibly removed, or until the *pariah* dogs swim in, and drag the carcase to the shore: there it speedily becomes the prey of various carrion birds, and of the indigenous village curs known by the above designation.

Under all the circumstances of such a combination of putrid animal and vegetable substance, of mineral adulteration, and of the miasma naturally arising from the almost sudden exposure of an immense residuum of slime, &c.; added to the cessation of the pure sea air, the wind changing after the rains from the southerly to the northerly points, are we to wonder at the malignancy of those fevers prevalent throughout the province of Bengal Proper, from the end of September to the early part of January, when the swamps are generally brought into narrow limits, and the air is laden with noxious vapors?

Although it appears, that the general sickness prevailing throughout Bengal at the above season, is induced by nearly the same causes that, according to our best informations, engender the yellow fever in America, yet no symptom of that alarming complaint has ever been known in India, nor does the bilious, or putrid fever, of Bengal at all assimilate in regard to symptoms with the American fatality. Certainly it is common to see whole villages in a state of jaundice, and in some years the ravages of the disease are truly formidable; but, though it may be classed as epidemic, we may, at the same time, annex an endemic distinction in regard to each village separately. Except in cases of putrid accession, or of obvious *typhus*,

there does not seem any danger of infection; and it has been proved, that the malady might, by proper care, be wholly averted. It is a fact, that, at several civil stations, and at some of the principal military contonments, which were formerly considered the emporium of fever, the inhabitants have been preserved in an ordinary state of health merely by cutting a few drains, or by banking up such places as formerly proved inlets to inundate plains that now remain sufficiently free from water to allow of pasturage during the whole of the rainy season.

The confinement occasioned by a long term of rain, must necessarily alter the habit, while the incumbent atmosphere, being laden with moisture, must, at the same moment, dispose the system to the reception, or to the generation, of disease. The poor native does not change his diet, and very probably retains the same damp cloaths for many days. His temperate system of living seems to be his greatest aid in case of illness; those medicines that in him effect a great change being found comparatively feeble when administered either to one of a debauched conduct, or to Europeans; who, being accustomed to a more substantial and more stimulant mode of living, are not to be acted upon but by the more potent of the materia medica.

It has often been asked, as a matter of surprize, how it happens that Bengal has never

been visited by the plague. The question has been founded on the supposed affinity between that country and Egypt, in regard to the annual inundations; and to the narrowness, as well as the filth, of the streets in the great cities; which would, if the conjecture were correct, induce pestilence, as the same causes are said to do in Turkey.

The case is widely different. In Egypt, although the lands are inundated, rain is scarcely ever known to fall; the floods coming from the southerly mountains. Hence, the inhabitants are under all the disadvantages attendant upon a hot atmosphere, during eight months in the year, and are, for the remaining four, exposed to the insalubrity arising from the inundation, especially when it is draining off.

In regard to the narrowness of the streets, and the filth they contain, something may be said in alleviation. The houses in Turkey are much higher, are built of more solid materials, and the inhabitants being wholly of one religion, viz. followers of Mahomed, but partaking of some of the bad habits of the neighbouring countries, being also in a more variable climate, more pointed attention is paid to durability and to closeness in the edifices, than is commonly shewn in India. In the latter country, the utmost jealousy subsists between the Mussul-

mans and the Hindus, but the latter are most numerous in every place, even in the cities where Mussulman princes hold their *durbars*, or courts. This jealousy occasions the Hindus to look upon every vestige of a Mussulman as a contamination; and, as ablutions are enjoined even more by the Hindu law than by the Koran, which is the Mussulman's book of faith, we may consider the person of a Hindu to be as clean and wholesome as repeated washings can make it. He wears only a small lock of hair, growing from a spot about the size of a dollar on the crown of his head. His cloaths are washed as often as his body, and, on the whole, it should appear almost impossible for him to carry any disease arising from, or communicated through, a deficiency of individual cleanliness.

The houses of the natives throughout India, if we except about one-third of Benares, about a twentieth of Patna, the same of Moorshadabad, and a mere trifle of the Black Town of Calcutta, are built of mats, bamboos, and straw; in the latter, they have been, under late regulations, tiled. The generality of village-huts are built with mud walls. On the whole, however, whether owing to cracks in the walls, or intervals between them and the thatches, windows, &c., the air finds a free course throughout. Add to this, that the natives do not sleep on feather beds, flock, &c., but generally on mats

made of reeds. This, of itself, may be considered a preventive against infection.

The fires kept up in the houses of the natives of Turkey are in fixed stoves, or under chimnies, which do not answer the purposes of fumigation. Whereas, the Indian, by means of a moveable stove, unintentionally fumigates the whole house; making the eyes of all smart with the smoke. This fuel is not bituminous; but, in every situation, is either wood, or the dried dung of cattle. Besides, the floor of a Hindu's house is, perhaps daily, washed with a thick solution of cow-dung, whence a freshness is diffused, not perhaps very gratifying, in point of savour, to an European's nostrils, but assuredly anti-septic, and answering various good purposes; especially as the walls are, to the height of, perhaps, three or four feet, smeared with the same mixture. The use of tobacco is common to both Turkey and India, and may be considered as contributary to a resistance against the damps during the rainy season, as well as against infection.

With regard to the apprehensions arising from filth, fortunately, they are not better founded than those just noticed as dependant on the narrowness of the streets. This lucky evasion of disease is not, however, to be attributed to any attention on the part of the natives individually, or to the fostering care of the native

governments. Few towns of any importance but are built on the borders of some navigable river, of which there are abundance throughout the country. The swarms of vultures, kites, crows, and of a large kind of butcher bird, standing at least six feet high, called the *argee-lah*, added to the immense numbers of *pariah* dogs, generally roving at liberty, and unacknowledged by any particular owner; together with the multitude of jackalls, that patrol through the cities, as well as the plains, during the night, all contribute to remove whatever carrion, or putrescent matter, may be exposed to their researches.

It would not, perhaps, be so easy to keep cities in a state of tolerable cleanliness in such a hot climate, if the inhabitants subsisted on butchers' meat. The shambles alone would prove highly offensive: it is therefore fortunate that the natives make rice and vegetables their principal food. There being no privies attached to houses in general, is an additional benefit; though accompanied with some small inconvenience, it being requisite to walk to the outskirts of the city, or, eventually, among some ruins, on all occasions. The privies of the higher orders of natives, and of Europeans in general, are built on a plan which admits of instantly removing the filth; a practice never neglected by a servant, whose office consists only

in that duty, and in sweeping the house at various times of the day.

The *argeelah*, or butcher bird, before mentioned, is to be seen partially all the year round; but, generally speaking, comes with the first showers in June, and stays until the cold season is far advanced; when it retires into the heavy covers on the borders of the large unfrequented lakes, near the mountains, to breed. This bird has been fully described in the representation of the Ganges breaking its Banks, in my work entitled the 'WILD SPORTS OF INDIA,' published by Mr. Orme, of New Bond-street, and by Messrs. Black, Parry, and Kingsbury, of Leadenhall-street. It is by some called the bone-eater, from its peculiarity of digestion; it having the power of swallowing whole joints, such as a leg of lamb, and of returning the bone after the meat has been digested: when thus rejected, it appears as clean as though it had been boiled for a whole day. I cannot give a better idea of the fitness of this bird to eat of the most putrid substances, than by stating, that I have frequently rubbed an ounce, or more, of emetic tartar into a piece of meat, which an *argeelah* has swallowed, without shewing symptoms of uneasiness on the occasion, though very closely watched for hours after. From this, it may be inferred, that ordinary stimulants do not disagree with the stomach of this unsightly, but innocent, and useful, animal.

Inland towns are usually built in the vicinity of some large *jeel*, or lake, or on some ravine, which, during the rains, forms a rapid water course. Such as are near to hills, are often, for many days together, impassable; owing to the torrents which, through their means, find a way either to some expanse, or to some navigable river.

The *jeel*, or, for want of one, the tank nearest to the town, usually becomes the receptacle of every Hindu corpse, and, at the same time, supplies the inhabitants with water for every purpose. One would think this intolerable practice were, of itself, sufficient to deter men, who pretend to the utmost delicacy and purity in all respects, from drinking at so contaminated and corrupt a reservoir. What then shall we say, when it is known that the borders of tanks, in such situations, become places of ease, where men, women, and children, perform their duties to the goddess in colloquial association; and where, having got rid of their burthens, they free themselves from its remains, by washing with those very waters whence, probably, another person is baling into his pot, or leather bag, for culinary purposes, or for beverage.

Tanks and *jeels* are, in almost every part of India, full of rushes, and of the conferva, which, together with duck-weed, docks, &c., both cover the surface and fill up the deeps. They

are, generally, replete with small fishes of various descriptions, and if of any extent, or deep, either harbour, or serve as visiting places for alligators, which infest both the running and the stagnant waters in every part of the country. These voracious animals travel at night from one *jeel*, or tank, to another; often announcing their presence by snapping up some poor unsuspecting Hindu, who wades up to his middle for the purpose of performing his ablutions, and of offering up the customary prayers on such occasions.

In many tanks, alligators are known to exist in numbers; nay, in some places, they are subsisted by the eleemosynary donations of travellers, who disburse a trifle in money, or present some provision to a *faqueer*, (or mendicant priest,) to provide food for the alligators, which come forth from the waters, on hearing the well-known voice of their holy purveyor; from whom they seldom fail to receive each a small cake of meal, or some other provision. This liberality does not, however, occasion any qualmish scruples of gratitude; it being found, that alligators thus handsomely treated are not a whit more reserved in the application of their teeth to bathers, &c., than those which have never been honored by such liberal consideration.

The respiration and effluvia proceeding from an animal, perhaps twenty, or twenty-five, feet

in length, and from six to twelve in circumference, must have an effect upon even a large body of water. Allowing that such a monster should consume as much air as ten men, which, surely, is not an unfair calculation, and that twenty gallons of water contain one of air; as a man, on an average, consumes one gallon of air in a minute, the alligator must consume twelve hundred gallons, equal to near twenty hogsheads, in an hour: in twenty-four hours, the quantity of water contaminated by one alligator would amount to four hundred and eighty hogsheads!

From this, we may conceive the effect produced by the presence of, perhaps, seven or eight alligators in a tank not exceeding two acres in measurement, and no where above twelve or fourteen feet in depth: we must likewise take into the account abundance of fishes; for, if that abundance did not exist, the alligators would speedily decamp. Add to these two sufficient drawbacks, all that has been said of the impurities added by the inhabitants, and we shall form such a nauseating and unwholesome combination as must cause us to wonder how ever one should be left to tell the fate of his lost friends.

Amidst the mountains, where, of course, the inundations cannot be of any duration, and where the waters of every description are limitted as to extent; the streams being very

small, and, excepting a few hollows between two hills, or, eventually, a valley, in which a pool may exist, alligators are to be seen. They are generally small, but of a very savage species, making up, by their rapacity and activity, for the want of that bulk which renders the alligator of the great rivers more apparently dangerous. By the term 'small,' we must not conclude them to be diminutive, but, that they rarely exceed twelve or fourteen feet in length. Such will, however, seize a bullock when wading in a tank, or *jeel*; stealing upon him with the utmost caution, so as not to disturb the fluid, and even keeping the dorsal spines depressed until the very moment of seizure; when, fastening upon the unwary animal's leg, and throwing his whole weight backwards; at the same time swinging round, so forcibly as to raise the greater part of his disgusting frame above the surface, the alligator, by one violent effort, which appears almost instantaneous, ordinary succeeds in dragging the poor animal into a sufficient depth. Pain, surprize, and the unrelaxing bite of his devourer, combine to disable him from making any adequate resistance; being, besides, kept completely immersed by the subtle and experienced assailant, no more is seen, except that the waters appear for about a minute violently agitated by the efforts of both parties: the alligator is, however, com-

pelled to raise his head above the surface when in the act of deglutition. This is seen daily, even when a fish becomes the victim. On these occasions, the stupendous animal rears in the waters, exposing sometimes so far as his shoulders, and ordinarily biting the fish in two, when, with the utmost ease, he swallows what would make a hearty meal for thirty or forty men of keen appetite. I have frequently seen an alligator thus chuck down a *rooee*, or river carp, weighing from fifty to sixty pounds: a size by no means uncommon in the great rivers of Bengal!.

The great use made of water by the natives in every part of India, occasions an immense number of tanks and wells to be dug, chiefly by persons of property, under the pretence of aiding the poorer classes, but, in fact, with the view to become popular, or of transmitting their names to posterity by affixing them as designations to the tank or well in question. This takes place equally in regard to plantations, generally of *mango* trees; and in the building of *seraies*, for the accommodation of travellers, such as Europeans generally understand to be caravan *serais*; but that term can only apply to those parts of Arabia, &c., that furnish caravans; which are not known in the great peninsula of India; where, on account of the extent of

sea-coast, navigation absorbs the chief part of the trade. *Seraies* are usually known by the name, or title, of the founder. Thus, *Maraud ka Seray* implies that the public accommodation for the reception of travellers was founded by Maraud; respecting whom the people in attendance either have some traditional account, or supply a famous history, invented for the occasion.

Seraies are now going fast to decay; the power of the native princes has been so much abridged, and their influence is so little felt, that, generally speaking, were a rich or exalted character to found a *seray*, even on the most liberal footing, it is probable his expectation of immortal fame would not be realized. The rage is now more bent towards *gunges*, or grain markets; *hauts*, or villages, holding periodical markets; *maylahs*, or annual fairs; and, in fact, to such establishments as afford a profit, or which, from becoming notorious in the way of trade, are more likely to perpetuate the celebrity of the institution.

Durgahs, (commonly called mosques,) appertain exclusively to those of the Mahomedan faith, and *mkuts*, which are, properly, places of Hindu worship, also *madressahs*, or colleges, with endowments for *faqueers*, or Hindu priests, seem to hold their ground. These, like the abbeys of Monkish times, are ever to be found

in the most beautiful and most eligible situations: above all things having a command of excellent water.

The tanks in the hills, that is to say, such as have resulted from artificial means, are generally small, full of weeds, and rarely lined with masonry: their banks are soft, and the waters, being accessible to cattle on every side, foul and turbid. Sometimes these become nearly dry during the hot months, affording, if any, a most offensive and insalubrious beverage. Nevertheless, the indolent native will often drink thereof, rather than send half a mile to a purer spring. The generality of these tanks have originally a regular supply from numberless springs, fed either by a natural syphonic process from higher lands, or by percolation of the profuse dews that, throughout the immense jungles on the higher soils, fall during the hottest months; but the want of proper attention to preserve the tanks from the incursions of cattle, which, being very wild in their nature, often swim or wade over to the opposite sides, quickly choak the springs, which, in such open soils, easily find other vents, and expose the inhabitants to great suffering from drought. In many instances we see wells dug in the tanks; thereby causing a great saving of labor; as, when once a spring discharges into the tank, in such a situation, it is not necessary to dig the whole area to an equal

depth. This is a cheap expedient, adopted by such as have vanity enough to attract public notice, but not money enough to do the thing completely, or to a great extent.

From these causes, we are led to the consideration of those effects produced in hilly countries, by the waters in common use. Nor are we deceived in our expectation as to the results naturally arising from so forcible an agent. We find throughout the hilly country, that, exclusive of the diminutive features attached, all over the world, to the various classes of mountaineers, there is an additional tendency to departure from the ordinary bulk of the natives in the adjacent low lands, obviously induced by the diet, and most especially by the waters in use. It is remarkable that in Tomar, the back part of Chittrah, and Ramghur, where the immense extent of low woods almost debars population, and where the Hill people, known by the name of *Dhangahs*, subsist principally on rice, wild fruits, and, occasionally, a little game, and where they drink of water such as has just been described, collected either in small pools, or in artificial tanks, the inhabitants are extremely stinted in their growth, are squalid, troubled with wens, half devoured with a kind of scurvy, herpetic eruption, and appear even at a very early age to lose their vigor. They have, besides, a peculiar kind of opthalmia,

partly induced by an excessive passion for liquor, there distilled in large quantities, and by their exposure to a damp, impregnated atmosphere: while in their huts, their whole happiness seems to consist of an intense fumigation, chiefly from green-wood, such as would wholly suffocate one not habituated from his birth to so admirable an imitation of the fumes of Tartarus.

The difference between these haggard objects, and the inhabitants of the plains from which the mountains take their rise, requires no comment. It most forcibly arrests the traveller's attention, causing him to doubt whether, within the short interval of perhaps six or seven miles, he may believe his senses, which pourtray to him a change from vigorous and personable manhood, to a decrepid, hideous, and dwarfish, state: more resemblant of the Weird Sisters than our imaginations can conceive, or than our best comedians can represent.

Some tanks, dug by the more charitable persons of property, are on a very extensive scale, covering perhaps ten or twelve acres. Many of these are of great antiquity, and have been very deep, perhaps thirty feet, but by the growth of vegetable matter, added to the heavy bodies of sand and dust that nearly darken the air in the dry season, of which much falls into the waters, their depth is considerably reduced:

in some, various shoals appear, indicating the accumulation of rubbish, and in a manner reproaching those who use the element with indolence and ingratitude. In such places fish abound, and grow to an astonishing size, sometimes affording excellent angling, but their flavor does not correspond with their looks; for the most part they are intolerably muddy. The quantity of weeds, the shoals, and various posts being generally sunk in different parts of the tank, armed with tenter-hooks, for the purpose of preventing poachers from robbing the stock, are insuperable bars to the use of nets. Boats are not in use in such places, and there seems to be no attention in any respect to any thing relating to such waters, except that the *shecarries*, or native sportsmen, exercise much ingenuity and skill in their depredations among the wild geese, wild ducks, teal, widgeons, &c., with which all the waters of India are profusely stocked during the winter months; when every unfrequented puddle is covered with wild fowl, which often alight during the dark nights on waters situated in the very hearts of cities, in which sometimes tanks are seen of such size, as to secure the birds, when collected near the centre, from the reach of small shot. This, though not to be classed with daily occurrences, is by no means singular.

By far the greater number of tanks, especially

those by the road-side, or contiguous to cities and populous towns, are walled in with masonry. In such case, they have at one, or more sides, either a long slope, or a flight of steps of excellent masonry; some, indeed, have both, the former being intended for the use of cattle, which are either suffered to drink there, or are employed to carry large leather bags of water for the use of the inhabitants. Owing to the great force of the periodical rains, and to the swelling of the soil during the season of excessive moisture, the masonry is generally burst in various places, and for the most part either sinks, or is prostrated into the tank. As no credit would follow the repairs of such breaches, they are left to their fate.

A due attention to the proper proportion of base, so as to give a substantial talus both within and without the walls, added to the precaution of leaving vents for the free discharge of the springs, or the super-abundant fluid, into the tank, would most assuredly counteract so destructive a weakness as now generally exists. I cannot call to mind, at this time, any very old masonry that has not succombed thereto, excepting the great *bund*, or dyke, at Juanpore; which, according to tradition, was built about fifteen hundred years ago, and having been made of a very obdurate kind of *kunkur*, found in those parts, blended with excellent lime, probably burnt from the same stones, appears now a com-

plete mass of rock, capable of resisting the ravages of all time to come. This *band*, which bears all the venerable marks of antiquity, was originally thrown up to limit the Goomty; a fine river that rises in the Peelabeet country, and, washing Lucknow, the capital of Oude, passes through the city of Juanpore under a very lofty bridge, built on strong piers, terminating in gothic arches. The want of due breadth in the arches occasions the waters to rise during the rainy season to an immense height, creating a fall of which that at London Bridge, at its worst, is indeed but a poor epitome! The distance between the top of the bridge and the water below it, in the dry season, is something less than sixty feet; yet it is on record, and in the memory of many inhabitants of Juanpore, that the river has been so full as to run over the bridge, which is flat from one end to the other, lying level between two high banks, distant about three hundred and twenty yards.

Formerly, when the waters were high, they used, according to the tradition alluded to, to over-run the country on the left bank; forming an immense inundation throughout the country lying east of Juanpore, and extending down towards the fertile plains of Gazypore. The hollow, or low land, by which they penetrated, was about two miles in width; therefore the *band* was built to a suitable extent: it is now about

two miles and a half long; in most parts, about thirty feet broad at the top, and double that width at the base. Its height varies from ten to twenty feet. The record states it to have proved effectual in resisting the inundation, which, however, on account of the *bund* being at right angles with the river, so as to occupy a favorable position, and cut off the torrent, continued to flow annually as far as its base. In time, the sediment deposited by the water thus rendered stagnant, filled up the hollow, raising its surface as high as the other parts of the river's boundary, and creating a soil peculiarly valuable, now chiefly occupied by indigo planters. The insalubrity occasioned by the many swamps left by the inundation, was at the same time averted, and the dread entertained that the Goomty would, in time, force a new channel for the entire body of its stream, removed. Large tracts, before of little value, acquired a deep staple of soil, which, at this date, yields sugar, indigo, wheat, barley, &c., in abundance and perfection.

The rage for digging tanks, has, I apprehend, in a certain measure, subsided; for we find little of that very absurd ostentation now prevalent, which must have actuated to such immense works, rendered useless by their too great number, or carried to an excess in regard to their measurement. It would be, perhaps, difficult

to ascribe to any other motive than that of unparalleled vanity, why a man should have dug near seventy tanks, all nearly contiguous, on a plain not many miles distant from the military station of Burragong, in the district of Sircar Sarung, situate between the Gunduc and the Gogra. The population did not require more than one tank; especially as a stream of tolerably good water passes within a few hundred yards of the site of these offsprings of ostentation. The inhabitants tell various stories as to the person who lavished his money in this empty manner; and, (which would, no doubt, vex the real prodigal to his very heart,) the modern narrators differ widely even as to the name and rank of the individual!

With respect to *seraies*, we may, at least, praise the convenience they afford, without bestowing much admiration on the charity of their founders. Some of these are very extensive, covering, perhaps, six or eight acres. They generally consist of a quadrangle, built across the road, which passes under two lofty arched gateways, having battlements, or turrets, over them. The gates open to an extent sufficient to allow any laden elephant, however stupendous, to pass freely. They are made of strong wood, well bound with iron, and studded with iron spikes, of which the points are on the outside; for the purpose of preventing elephants from

forcing them by pressure. The surrounding walls of the quadrangle are generally about fourteen feet in height, and from two to four in thickness, according either to the antiquity of the building, or to the parsimony of the builder. They are lined all around with a shed, built on pillars, and divided by mats, &c., into various apartments, all sheltered from the sun and rain by means of doors, &c., of bamboos, mats, grass, &c., as the country may afford; or, eventually, a part is built up with thin brick, or with mud.

In the central parts of the *seray* there are generally some shops, ranged on each side of the road, and one building appropriated to the *cut-wal*, or superintendant of the place; whose office is, properly, to regulate all matters, and to see that travellers are duly accommodated; that the *bytearahs*, or cooks, dress their victuals, and that the *chokey-dars* take due charge of the goods consigned to their care. All this, however, is done in a slovenly way; the greatest impositions are often practised; and the itinerant journies on from one scene of thievish combination to another.

Although a *seray* may be built near to a river, or to some sufficient stream, yet there is invariably a well, ordinarily lined with circular tiles, or masonry, in the area. The water is drawn from such wells, for the most part, by means of

a truck-pulley, suspended between the limbs of a forked bough cut for the purpose, and having a wooden pin through it as an axle. Each person draws his own water, and for that purpose carries a line, generally about twenty feet long. Few indeed travel, even on foot, without a *lootah*, or brass water-vessel; of which there are various sizes, from a pint, to half a gallon; a *tully*, or flat brass plate, with a border about an inch high, nearly perpendicular; and a *cut-torah*, or metal cup. Some even carry their *daikchees*, or metal boilers; though, in general, they purchase for a farthing, or, at the utmost, for a halfpenny, a new earthen pot, capable of holding perhaps three quarts, or a gallon, with a lid of the same, in which, if they do not intend to employ the people of the *serary*, they dress their own victuals; leaving the crockery, which no one else will use, it being considered as polluted.

The water of wells in the *seraies*, or in populous towns, is certainly far fresher and better than is to be had, in general, from small rivers. But much will depend on the soil, the lining of the well, its depth, and, indeed, on its width. A quick draught necessarily insures a plentiful flow, and prevents corruption from any impurity that may casually fall in from above. At a certain depth there is usually found a stratum of sand; this is remarkably fine, and, in some places, re-

tains such a large portion of fluid as to become a perfect quicksand. In many parts, and especially in the Ramghur district, which, on an average, may be a thousand feet or more above the level country, this sub-stratum presents a most serious difficulty in the sinking of wells.

Of this I experienced two instances in my own practice, which gave me much trouble. Having to sink a well in the corner of a garden, and wishing to avoid the expence and delay attendant on masonry, I cut a square shaft, and went on admirably until I came to a tremulous body of sand. Never having met with a quicksand at such a depth, then about twenty-four feet from the surface, and on so elevated a table land, there being no hills nearer than two miles, and those being separated by deep vallies, in which were running streams, I was somewhat disconcerted. I felt the whole of the difficulty, but necessity urged me to proceed. The well was to be lined with logs of about seven feet long, and about eight inches diameter; they were notched at each end, so that two, being placed parallel at five feet distance, and two others being laid over their ends, the four made a quadrangle, which, by means of the notches, came nearly to a level, and locked very firmly into each other. Having prepared abundance of these logs, I commenced my operations, by affixing a pulley over the well for the purpose of lowering them down to a

laborer who stood on a board slung from four stakes at the brink of the shaft; for he could not stand on the sand, which, when the surface was broken, instantly became loose and liquid. The four first logs were scarcely placed before their own weight began to sink them, scarcely allowing time to put on four others before they disappeared. I perceived my error, and immediately had the other logs all wrapped round with straw-rope of about an inch in diameter; whereby they became more buoyant, and resisted the liquescence of the sand more powerfully, by their encrease of diameter. As a foundation, I pinned the four first, forming the primary layer, strongly at their several corners; so that they made a fixed frame. The work now went on merrily, but it was with the utmost difficulty I could supply the logs fast enough, the sand removed by their admission rose so very rapidly. Being determined to overcome the difficulty, I let down full twenty rounds of logs, equal to about seventeen feet, when I had the pleasure to see no more would sink: the sand was excavated, and I found, that, although in one or two places intervals of two or three inches had taken place, yet, on the whole, I was able to boast of better success than I expected. By degrees, I got the logs settled in their places, (a work of serious labor,) and always had water enough for every culinary purpose, but not for a large garden, which required ample irrigation

daily during the hot season; further, a quantity was indispensably requisite for wetting the *tatties*, or frames applied during that season to the doors and windows, to keep my house cool.

My well appeared full of water up to the top of the quicksand, but it was a perfect deception: the sand filled up the shaft in the course of three or four days, though emptied to the very bottom, which was a hard red clay.

Finding that more expence was incurred by the perpetual necessity for sending men down to empty out the sand, I resolved to adopt the old custom of lining the well with masonry; and having got all clear to the bed of clay, into which I sunk a stout frame, near a foot and a half deep, I went on with spirit for a whole day, in which near two yards of wall were built up: but, during the night, the balers went to sleep, and I found the whole immersed in the morning. As the sand and water were emptied, the draft was so great as to wash the lime from between the bricks, and I was compelled to take all out again. It then occurred to me to have bricks made in the form of the frustum of a pyramid, so as to fit exactly in a circle of two feet and a half in diameter internally, and of four feet externally. These were laid on the frame, which I now buried a full yard in the clay: between the bricks I put abundance of dry lime, rubbing them close together, and, with the clay, all the

interval between the masonry and the wooden frame was filled up. Two workmen were employed all night; one in the well, who ladled the water from the four corners into a bucket, which the other raised to the surface: none worthy of notice got within the circular masonry, and I had the satisfaction, in about a week, to see the whole completed. Sufficient water found its way through the crevices, to keep me supplied, and the sand gave so little trouble, that, during a whole year that I occupied the premises, no clearance was necessary.

This digression may appear irrelevant to the subject; but I could not forbear giving the fact a place here, as it possibly may prove an useful guide to others who may be under similar disadvantages. It is curious, that a very large well, of about twelve feet diameter, was commenced at the same time by a brother officer, within a hundred yards of mine, which went on admirably, and was finished in a very short time. He had no quicksand opposed to his labors; on the contrary, his great difficulty lay in cutting through two strata of rock, from which only a few dribblets appeared while the well was lining with masonry; but, so soon as the rainy season set in, those rocks prevented the descent of the moisture, which, being by them directed to the well, rushed in such a violent manner against the masonry, as to force out many stones;

creating a fissure which, in a few weeks, proved fatal to the whole of the work. A handsome well, with a rich spring issuing from a gravelly bottom, was thus ruined, and the station was again subjected to much inconvenience for what we often had in too liberal abundance.

The natives throughout India have a great respect for such persons as plant *mango topes* (or woods). These are, in general, managed with great care, the trees being set at regular distances each way, forming parallel vistas both lengthwise and breadthwise: the width of which are equal each way, and varying from twenty to forty feet. When first planted, they are well enclosed with a ditch and bank, sufficient to prevent cattle from doing mischief to the young trees, which are also watered at intervals during the dry season, generally through the means of a well, dug at the expence of the planter on one side of the *tope*. If the proprietor be rich, the well is usually large, lined with masonry, and furnished with cisterns of the same, or of hewn stone, so that cattle may be refreshed in numbers; two pillars of masonry, or of substantial wood, are erected; each supporting the end of a timber, stretching across the well at about five feet above the brink. On this timber, a shieve of wood is fixed, with one or more grooves for the reception of the cord used in drawing water.

The first-fruits of plantations are, with few exceptions, considered as appertaining to the tutelary deity of the planter, and are tendered to him as offerings on the part of the *tope*. The priests who officiate on these august occasions, commonly find means to save the sacred character of their invisible patron from any suspicion of gluttony, by taking upon themselves the troublesome office of proxy, on this and every occasion wherein mastication is needful.

On many of the great roads, such as that leading from Benares to the upper stations, we find very large wells, conveniently situated near some shelter, though, perhaps, distant from any town: occasionally, a hut or two may be erected in the vicinity, for the residence of a *bunneah*, (or kind of chandler,) or for a vender of spirits. Some of these wells are furnished with various sets of pillars and shieves, very substantial in their construction; so as to bear the weight of a leather bag, formed by stitching the edges of a whole hide, trimmed of its superfluous angles, &c., to an iron hoop of about a foot and a half in diameter: by means of two arched irons, rivetted at their crossing in the middle by a swivel and loop, the bag, or *moot*, is managed in the same way as a bucket in Europe. Many of these *moots* are capable of containing, at least, half a hogshead. They retain the water more steadily in ascending, than any vessel

whose sides are fixed and firm; and, as they are drawn into a cistern, or over a bed made hollow for their reception, above the brink of the well, no great exertion is required in emptying them; the waters discharging voluntarily when the *moot* is suffered, by the slackening of the rope, to touch the bottom of the bed, or cistern.

It may reasonably be inferred, that such a weight of water as may be contained in an ordinary ox or cow hide, though of small growth, must be more than manual strength could well manage; especially as the pulley is extremely small, rarely more than six or seven inches in diameter, nearly as much in width, and moving on a rude piece of wood for an axis; of which, probably, nearly half has been lost by the excessive friction so unfinished, and ill proportioned, a piece of machinery must occasion. Not one in a thousand ever is lubricated, but the hole in the shieve is generally adequate to the admission of an axis treble the size of that in use; whence the pulley must jump from one inequality to another; creating, at every such transition, a check of some consequence to that power whence it derives its motion.

To draw water by means of the *moot*, two men and a pair oxen are requisite: the size of the *moot* being proportioned to the bulk of the cattle, which are yoked in the ordinary manner, drawing by means of the rope fastened round

the centre of the yoke, and passing between them. The strength of the oxen is aided very considerably, by the path they follow being on a declivity; so that, in proceeding from the well, as they draw up the *moot*, they descend a talus, or slope, of which the angle may vary from fifteen to twenty-five degrees: the driver frequently seats himself on the yoke, to encrease the weight acting in opposition to the *moot*.

The quantity of earth derived from the shaft of the well, rarely suffices to give the talus sufficient slope, therefore, one half the length of the bullock's track (which is regulated by the length of the rope, and may usually measure about twenty-five yards) is sunk in the ground, and the height near the well raised with the proceeds of the excavation. This ensures a sufficient addition to the energies of the cattle in descending: which they do with great effect, when goaded by the driver. Arriving at the bottom of the slope, or when the *moot* is raised above the surface of the well, the cattle stop, and the man in attendance at the brink draws the *moot* over the bed, or cistern, which is made to project over about one-third of the well.

Some of the wells seen at the sides of the great roads, measure fifteen or sixteen feet in diameter, and have slopes cut out of the soil, lined on each side with masonry, that lead to an opening in the well's circumference, near to the

ordinary level of the water; which, in the dry season, is generally within very narrow limits. Near the opening, we sometimes see an iron ladle fastened by means of a chain. This convenience is, for the most part, held sacred, and he would, in those parts, be considered a consummate villain, that would pilfer one from its place of security. But, from many obvious marks of violence, we must suppose that there are men so depraved as to steal these chains and ladles, when necessity may press them to take advantage of a fair opportunity.

We should naturally conclude, that wells founded on such a principle, in a climate where excessive heats prevail for three months, at least, would be invaluable. But they really are little used; their surfaces are, in general, covered with duck-weed, and they rarely are deficient of an ample colony of frogs. Where huts are built near them, their waters being rather less stagnant, are, of course, more wholesome, as well as more palatable; the encampment of a regiment in their neighbourhood soon sweetens them.

Some are rendered foul by their containing fish. It would be difficult to account for fish being there, unless they fall with the heavy showers attendant upon those violent squalls called north-westers, during the hot season, when multitudes of small fry have been occa-

sionally found, even on the tops of houses, in various parts of the country. Some assert that many have been found alive: I have seen some lying dead; once, in particular, near Allahabad, after a very heavy shower of rain. It does not appear possible, that, even if sucked up by a water-spout, and immediately returned with the rain, they could survive the rapidity of the ascent, and the force with which they fall.

It is remarkable, that only three kinds of fish are ever seen in wells; viz. the *solee*, which, in a great measure, resembles our *pike*, and is equally ravenous; the *gurrye*, or mud-fish, very similar in form to our *miller's thumb;* and the *singnee*, or bayonet-fish, so called from its having three terrible spines in its dorsal and lateral fins, the wounds made by which are, generally, very severe. This fish has a purplish skin, without scales, is thin like a substantial pork knife, and has a broad flat head. Like the *gurrye*, it is found only among mud and slime, wherein it works very nimbly. Both species can live a long while in moist mud; as is proved by their being found in recent puddles, where water had formerly been dried up. It is remarkable, that both the *gurrye* and the *singnee* are very sweet eating, and are never muddy; the latter in particular.

If we except those small streams that come down from mountains containing ores, which

must, of course, impregnate the waters in those parts, the catalogue of mineral springs, as yet discovered in Bengal, and the subordinate stations under that presidency, will be found very confined indeed. Possibly, numbers may exist that are not generally known; and this I am the more apt to believe, from having myself discovered one within a few yards of the road on the west bank of the Mahana, a small river which rises among the hills near the Catcum-sandy-pass in the Ramghur district. The river being much swelled by heavy rains, I was compelled to wait until it subsided sufficiently to admit of my being conveyed over on a raft made of pots.

The mineral water above mentioned would, very probably, have escaped my notice, had I not been attracted by a nauseous smell, and the black greasy appearance of the soil whence it issued. The flavor was soapy, but strongly sulphuric; and a slight scum, which appeared to rise with the spring, was peculiarly acrid. I do not believe it was ever analyzed, but should conjecture it to have proceeded from a bed composed of sulphur and bitumen; especially as coals are found within that district.

There is a very remarkable hot-spring at a place call *Seetah-Coon*, within three miles of the fort of *Monghyr*. This, it appears, has been known for ages. It is about twelve or fourteen

feet square, and may be from seven to eight feet deep in the middle: that, however, must be taken as a computation; the sides being of masonry, shelving in greatly, and the bottom not remarkably clear of weeds, &c. The water is very hot: it was with great difficulty I could keep my finger immersed during the time I counted one hundred and five; and that, too, rather hastily, it being for a wager. My finger, far from being the better for my curiosity, was slightly blistered. I have seen an egg moderately poached at this spring, and have heard that one was boiled in it; but, I apprehend, not to any degree of firmness.

The most complete proof that a large portion of caloric is contained in this spring, may be collected from the melancholy fact, of an artillery soldier, who, in the year 1777, attempting to swim across, was scalded in such a manner as to expire shortly after being taken out.

The natives, who judge by appearances, and, probably, are guided in this particular from the encreased quantity of vapour that appears during the winter to rise from the spring, affirm, that the water is then considerably hotter than at any other season. The fallacy of such an opinion is easily detected, and has, indeed, been proved: several gentlemen have been at the trouble of keeping a register of its daily variations, which were found to be ex-

tremely small. I could not assert myself to be correct in stating its average degree of heat, having mislaid my memoranda on that head; but, to the best of my memory, the temperature lay between 140° and 160° of Fahrenheit.

This well, of which the waters are considered remarkably wholesome, stands on the borders of a small plantation of (I believe mango) trees; near to three or four other wells, of which the waters are cold, and have not any distinguishing quality. The redundant water from the hot well affords a stream, whose section may be equal to thirty square inches; it passes into a large marsh, of at least twenty acres, close to the plantation, where it nourishes a great variety of aquatic plants, that appear to grow with more than ordinary vigor.

The same negligence in regard to botany and natural history, which appears to operate throughout India, (if we except the labours of a few zealous individuals, among whom. Captain T. Hardwicke, of the Bengal Artillery; Dr. Roxburgh, Superintendant of the Botanic Garden at Calcutta; Dr. Bruce, formerly Physician to the Nabob of Oude; and Dr. William Hunter, of the Bengal Medical Department; are the most conspicuous,) seems to operate against enquiry into various important matters relating to the mineral waters; which, I doubt not, would be found in abundance, were either

the cost of research so moderate as to permit active individuals to explore the vast regions whose very boundaries are, as yet, scarcely known; or, were the Government of India to defray the expence of a few capable men, whose time should be wholly devoted to an enquiry into whatever might appertain to botany, mineralogy, natural history, and the various branches of knowledge on which chemistry and physic depend. The disbursement could not be felt; while, not only would the world at large be benefitted, but, possibly, some new articles of trade, or for manufacture, might be discovered; whereby even the Company itself would derive those *solid* advantages to which, on most occasions, they direct the attention of their servants.

Such has been the negligence shewn in regard to the hot well at Monghyr, that, although it stands within two miles of the Ganges, is not more than three miles from the Fort of Monghyr, (a grand depôt for stores, garrisoned by upwards of two thousand invalids,) and is in the direct track from Calcutta to the upper provinces; nay, although the waters of this well are sent for from all parts of the country, and form, frequently, a part of the stock of persons, especially ladies, going to sea; for which purpose it is bottled in very large quantities; yet, strange to tell, its properties

have never been duly analyzed. I have been in company with various medical men, who differed as to its basis; some asserting it to be chalybeate, others considering it as impregnated with soda, while some, I know not why, declared it to possess no particular impregnation, nor any active principle.

It must be evident, that, in a country whose soil is subject to be parched during so many months in the year, heavy fogs and miasma must abound; consequently, during the four months following the cessation of the annual rains, it frequently happens that the atmosphere is laden with mists and vapors until a very late hour in the day. In great cities, the bad effects of these are not so perceptible, on account of the general fumigation which takes place during the evenings, when the bulk of the inhabitants, as if by general consent, kindle fires for the purpose of cooking their victuals; of which they rarely eat at an earlier hour than six or seven o'clock; the cold remains of the repast being put by for the morning's meal. This fortuitous circumstance tends to purify the air, and obviates a large portion of those evils to which the villages, which stand more exposed in the midst of the marshy tracts, are imminently subject. In such, it is common to find a very large portion of the inhabitants annually laid up

with intermittents of a very obstinate description, but from which they are rescued by their moderation in regard to diet, and by a few medicinal simples every where common, and whose application is sufficiently understood. Great numbers are, however, swept off by the disease itself, or by the obstructions it generally creates. Those obstructions are ever to be dreaded, even though a perfect cure should apparently have taken place. It is by no means uncommon to see persons, especially Europeans, who have, to appearance, been cured of Jungle, or Hill-fevers, as they are locally designated, and which correspond exactly with our Marsh-fever, laid up at either the full or change of the moon, or, possibly, at both, for years after.

Many have affected to doubt the planetary influence on the human constitution, but, to me, there appears every reason to accredit the opinion. I have seen so many instances, among my own most intimate friends, as well as a thousand ordinary cases among soldiers, camp-followers, villagers, &c., that my mind was fully made up on the subject long before I had the opportunity of perusing the treatise of Dr. Francis Balfour, of the Bengal Medical Establishment; from which I offer to the consideration of my readers the following interesting extracts.

OF THE PAROXYSMS OF FEVERS.

'In Bengal, there is no reason to doubt that the human frame is affected by the influence connected with the relative situations of the sun and moon. In certain states of health and vigor, this influence has not power to shew itself by any obvious effects; and, in such cases, its existence is often not acknowledged. But, in certain states of debility and disease, it is able to manifest itself by exciting *febrile paroxysms;* and the propensity, or aptitude, of the constitution to be affected with febrile paroxysms in such cases, may be denominated *the paroxysmal disposition.*'

OF PERFECT TYPES.

'Febrile paroxysms universally discover a tendency to appear, and to disappear, in coincidence with those positions of the sun and moon that regulate the rising and falling of the tides. The diurnal and nocturnal encrease of sol-lunar power acting on constitutions, in which the propensity of the paroxysmal disposition is complete and perfect, produces paroxysms every twelve hours, in coincidence with the periods of the tides; and constitute types which, on account of this regular coincide, I denominate perfect.'

OF IMPERFECT TYPES.

'The diurnal and nocturnal encrease of sol-lunar power acting on constitutions in which

the propensity to paroxysm is incomplete, or imperfect, has power only to produce paroxysms in coincidence with every second, third, or fourth, period of the tides, or others, more remote; constituting *types*, which, on account of this irregular coincidence, I have called *imperfect*.'

Doctor Balfour states, in a note, that, 'In several cases of the plague, recorded by Dr. Patrick Russell, the febrile paroxysms returned obviously every four hours, in coincidence with the periods of the tides; and his predecessor and relation, the author of '*The Natural History of Aleppo*,' asserts positively, that the generality of the fevers there, and, indeed, in almost all acute cases, are subject to exacerbations once or twice in twenty-four hours.'

In Cordiner's Description of Ceylon, I find the following passage:—'Medical men have discovered this swelling' (viz. the *elephantiasis*) 'to be an effect of fever, *which returns on the patients monthly*.' (Vol. I. page 182.)

The natives, generally in the first instance, have recourse to the *bit-noben* or *kala-neemuk*, (*i. e.* black-salt,) a solution of which, though certainly very disgusting, on account of its taste, strongly reminding us of the scent of gun washings, or of rotten eggs, proves an excellent cathartic, and, if duly persisted in, rarely fails to rid the patient of an immense quantity of

bile. That being effected, a strong decoction of *cherrettah*, a root about the size of slender birch twigs, but of a redder color, and possessing some of the properties of Peruvian bark, is frequently taken. But, the best medicine in the catalogue of Indian simples certainly is the *lotah*, or *kaut-kullaigee*, which is the kernel taken from the pod of a creeping kind of cow-itch. This kernel is extremely bitter, and possesses all the virtues of the bark; but with this advantage, that, in lieu of binding, it commonly proves very mildly aperient when taken to the amount of two or three nuts daily. I have often given it, with great success, during the paroxysms of an ague; having previously cleared the stomach and intestines by suitable means, such as ipecacuanha and calomel.

That we are absolutely in a state of ignorance regarding the medical properties of various plants, highly appreciated by the natives, cannot be denied; we must not, however, yield an implicit belief to the many marvellous stories related throughout Hindostan, of the extraordinary cures performed by their aid: many disproofs of such fables are publicly extant, and teach us to view the objects so highly extolled through the medium of a *minifying* glass; thereby to reduce their virtues to the proper standard of estimation. So fully was that learned, and zealous president of the Asiatic

Society, Sir William Jones, impressed with an opinion of our overlooking many of the most valuable of nature's vegetable productions, that, shortly after the *formation* of that excellent institution, he expressed a wish, an earnest one, indeed, for early framing a code of the botany of Hindostan in particular; and, in a short address to the society, urged, that a 'Treatise on the Plants of India' should be diligently and carefully drawn up. In that address, Sir William says, 'Some hundreds of plants which are yet imperfectly known to European botanists, and, with the virtues of which we are wholly unacquainted, grow wild on the plains, and in the forests, of India. The '*Amarcosh*,' an excellent vocabulary of the Sanscrit language, contains, in one chapter, the names of about three hundred medicinal vegetables; the '*Medini*' may comprize as many more; and the '*Dravyabhidana*,' or, 'Dictionary of Natural Productions,' includes, I believe, a far greater number; the properties of which are distinctly related in medical tracts of approved authority.'

Here I must beg leave to enter my protest against the too ready acceptance of what the books above quoted may tender to our medical repositories; and that for the following reason; namely, although the natives may be sufficiently acquainted with certain properties of certain plants, yet, owing to a total ignorance of patho-

logy, phisiology, nosology, and especially of the circulation of the blood, and of chemistry as applicable to analysis and synthesis, it is utterly impossible they should be able to act except by rote, and according to their ideas of specifics; whereby the virtues of the medicines in question are supposed to be applicable to all the stages, not only of the same, but of various diseases, totally opposite in their natures. It surely cannot require to be pointed out, how uncertain the results must be under such circumstances, even when each simple is administered separately, and with a patient attention to its operation: but, when we take into account the known fact, that, on most occasions where the native *Huckeems*, or *Hakeems*, prescribe, they rely greatly upon compounds of herbs and minerals; each having its virtues recorded in some popular distich, to dispute which would be considered an open avowal of consummate ignorance: I say, under such circumstances, we may fairly, and, in duty to ourselves should, hesitate to receive information from so impure a source. It is not my intention to depreciate the merits of many simples in use among the natives: I argue against their competency to estimate them; but, at the same time, entertain no doubt that their several books may lead us to the greatest advantages, by giving hints, which, being properly, but

guardedly followed up, should enrich our catalogue of valuable remedies. This cannot be done in a few days, nor even in a few years: whenever it may be effected, I doubt not that the memory of that president, whose life was devoted to the service, not only of his existing fellow-creatures, but of posterity also, will be duly venerated. The Botanic Gardens established at the several Presidencies, under the care of medical gentlemen, duly qualified, offer the means of putting much assertion to the tests of chemistry, and of time: the former have not, as yet, been properly resorted to, and the latter has not run its due course, to enable the philosophical world to decide with precision.

In the first volume of the Asiatic Researches, the late Matthew Leslie, Esq. very sensibly observed, that 'there are in our Indian provinces many animals, and many hundreds of medicinal plants, which have either not been described at all, or, what is worse, ill described, by the naturalists of Europe.' In this remark there is much truth; but a certain portion of the very extensive meaning of Mr. Leslie, who was, assuredly, a man of considerable abilities, and who had much opportunity for research, will be received with caution, from the consideration of his avowed partiality towards native physicians; who, as I have just stated, are by no means competent to guide us through the mazes of

botanical research. The state of medicine throughout India, (I mean among the natives,) is not such as to induce the belief that we shall obtain any valuable information among the *Huckeems;* of whom, full ninety-nine in the hundred are self-taught, as well as self-sufficient. What, then, is to be expected among persons thus practising a profession, to which the old adage of '*ars longa, vita brevis*' so admirably applies, when we see not even one didactic page to which they can resort; no public institution where knowledge is either bestowed or received; no liberal, enlightened, patron, under whose auspices genius may be enabled to penetrate into the mines of science? This being the fact, shall we refrain from smiling at those of our countrymen who, quitting the aid and guidance of their well-informed medical friends, resort to such quacks, whose reputation they thus unjustly raise among the gaping crowd, and who have the art to propagate the most unbounded reliance on their nostrums? That, here and there, a simple of peculiar efficacy may be in use among such persons, I shall not deny; but must appeal to our more enlightened medical societies, whether, in the hands of an ignorant man, brought up in vanity, and regardless of the minutiæ of physical causes and of physical effects, even the most simple medicine can be safely entrusted? The greatest part of the

burlesque is, that these highly renowned physicians, to a man, rely upon proper conjunctions of the planets, lucky hours, &c., not only for the culling, but for the mixing, and administration of their medicines, without regard to those critical moments of which our silly disciples of Hippocrates and Galen are so very watchful!

We must, however, do the natives the justice to allow, that the refrigerating principle lately adopted by some of our leading physicians, owes its origin solely to the ancient practice of the *Brahmans*, or Hindu priests; of whom the generality affect to be deeply versed in pharmacy. I believe, that, if taken in time, few fevers would be found to degenerate into *typhus*, and that very seldom any determination towards the liver from acute cases would occur, were the refrigerating course to be adopted. Often have I known my servants, when attacked with fever, to drink cold water in abundance, and to apply wet cloths to their heads, with great success; the former has generally lowered the pulse considerably, by throwing out a strong perspiration, while the latter has given immediate local relief.

Were it not that *cast* (*i. e.* sect) opposes a formidable barrier to the more extensive practice of European physicians among the natives in general, the native doctors would speedily be consigned to their merited contempt: but such

are the prejudices arising from religious tenets, among the Hindus in particular, that, even when at the last extremity, many would rather die than suffer any medicine prepared, or perhaps of which the liquid part had been barely touched, by one not of their own *cast*, to enter their mouths! Where such infatuation prevails, ignorance will maintain her empire, until, by the gradual abolition of vulgar errors, the light of science, and of reason, may begin to glimmer among the people at large. It will not suffice, that a few skilful European professors should be seen, and be admired, by a grateful few: that has already happened; but the dread of religious anathema, and of domestic excommunication, are too forcibly opposed to such weak demonstrations. Unhappily, we aimed at a reform, in this particular, at that very point to which it should have had only a remote tendency: we peremptorily attacked the very existence of full a tenth of the whole population, that is, of the Brahmans, or Hindu priests; and we excited, among the people at large, suspicions such as have given scope to our enemies for inculcating, that we are intent on subjecting their minds, as well as their bodies.

From this dilemma, I understand, with pleasure, we are gradually extricating ourselves; by withdrawing those noxious publications, which, in a moment of unguarded zeal, we had allowed

our clergy to introduce to the notice of the people of Hindostan. With respect to the motive, that is out of the question: I am not considering the merits of one religion opposed to another, but simply the fact, as it relates to our political connection with the East, and the diffusion of true philosophy over that vast region. Nor am I here censuring the measure in a religious sense; though, on reference to history, and to my own experience of the dispositions of the Hindus, I feel surprized that fanaticism should have been allowed to meddle with a country over which we, in truth, have not an efficient control, and among a race whose tenets are by no means obnoxious to humanity; among whom apostacy is a mortal sin, who disclaim all interference with the doctrines of other sects, and who have most amply proved their title, at least to toleration, if not to protection.

I have said, that we began at the wrong end; and this surely will appear to be the case when the matter is properly understood. In lieu of attacking that which carries with it no offence against ourselves, and instead of endeavoring to force upon them our creed, we should have studied to render the natives acquainted with whatever could tend to their worldly comfort, and to the removal of errors often pregnant with destruction. Let us suppose, for instance, that, in various parts of the

country, the Company were to establish schools, where youths of every description might be instructed in the mathematics, botany, chemistry, surgery, pharmacy, agriculture, mechanics, &c.; and that luable premiums should, at certain periods, be presented to such as might merit the distinction. The obvious consequence would be, that, in due time, an infinity of absurdities would vanish, and that, in proportion as science should expand among them, the superior circles would begin to estimate our value as an enlightened people. They would then look up to us as their superiors; in lieu of rating us, as they now do, very low indeed on the scale of degradation. Such a system would not only give an effectual shake to the basis of priest-craft, but cause all the literary stores, and the natural productions of the soil, to be laid open to our examination: then, indeed, our medical men might enjoy a high reputation in every quarter of the East, and the world might be benefitted, both by the correction of many errors, and by the acquisition of most important novelties in medicine, and in the various arts on which commerce is dependant. Then should we have no occasion to goad the Hindus towards Christianity: they would thirst for knowledge, and pant to be rid of those fetters imposed upon their minds by their artful clergy.

I have heard it said 'the natives have no disposition for the sciences.' This is imposing a cruel sentence on a hundred millions of people! Allow it to be true; and look back to the state of Britain while under the control, in a certain measure, of the Druids; who are now well ascertained to have been the same, in their days, as the Brahmans of Bengal, &c., are at this time. Who can fail to admire the change? Who could suppose it possible that such a change could have been effected among a people, who, if we are to give credit to Cæsar, and to other authorities, were completely barbarous, and 'who shewed no disposition for the sciences?' In opposition to so absurd, and so malicious an assertion, let me state a few facts. When Mr. Reuben Burrow was in India, as head of the mathematical department, he was solicited by several of the natives to instruct them in astronomy, algebra, &c. Unhappily, although possessing pre-eminent talents, Mr. Burrow was not exactly calculated to conciliate the good will, nor to excite the admiration, of persons who did not, like himself, blaze at the spark of science: in fact, he partook greatly of the character of the celebrated Doctor Samuel Johnson, and might be termed 'a mathematical Hottentot!'

This important deficiency of suavity caused the natives to quit; indeed, it tended to disgust those of his countrymen who, being compelled

by their avocations to attend his lectures, were subjected to his caprices and gross manners. However, one native, of mediocre opulence, was not to be scared by what appeared a trifle, when compared with the acquirements he hoped to possess: he bent to the storm, and, by unremitting application, speedily rendered himself competent to converse with Mr. Burrow on his usual topic. In time, the student became a favorite, and was allowed to attend his preceptor when the latter was deputed on a survey of considerable extent, and to measure a degree of latitude in the western districts. Such was the progress made by this native under the auspices of Mr. Burrow, that, in a few years, he qualified himself to instruct others in the ordinary courses of the higher mathematics. What became of him I know not; but apprehend that many others must have derived some little benefit from his learning: unless, indeed, his priests found a pretext for upholding him as unworthy of imitation, and threatened to place all who might consider him to be thus '*civilized*,' or improved, under the bar of ecclesiastical censure. When I say '*civilized*,' it is in deference to a British divine, who has been pleased to represent the people of Bengal in such terms as might lead persons who never visited India to set them down for a cruel, barbarous, ignorant, vindictive, senseless, and sanguinary race; whose *civilization* is

'devoutly to be wished.' How far they merit such a character, may be understood from their forbearing to massacre all the Europeans in India; a work that might be effected by only one in thousands of their population striking the deadly blow!

Setting whatever relates to religion apart, and viewing our intercourse with India as a matter merely of *meum* and *tuum*, it is self-evident, that to whatever extent we may instruct the natives to analyze the produce of their soil, and to present it to us in a marketable shape, so much must Britain be benefitted by the extension of her commerce, and by the possession of a territory whose value would be thereby proportionally raised. This is said with the view to encourage the researches of our medical men; who, from their general knowledge of chemistry, and perhaps of botany, are certainly best qualified to pursue them with national effect. Under the present very limitted establishment of physicians and surgeons, as well as from the *præter nihil* benefits derived from the Botanical Garden, when seen in this point of view, we are not authorized to be very sanguine in our hopes that any important advantages will result in that direction. While the Company can barely afford a surgeon and two assistants to a regiment of 2000 men, it is not to be supposed they could form such establishments of the above description, as might

give us a thorough command over the mineral and vegetable productions of their territory, or tend to create a spirit of enquiry among the natives.

The want of printed books is, in every country, a great evil; but, in India, is a drawback of great moment. There, all books, all proclamations, (except such as we print at Calcutta, &c.) all newspapers, &c., &c., are manuscripts. It is not to be imagined how few volumes are to be seen even of this kind. We should suppose that, where provisions, lodging, cloathing, fuel, &c., are so remarkably cheap, learning would become general: the reverse is, however, the case; not one in five hundred can read, or write, even indifferently. There are abundance of little day-schools to which children may be sent at a very trifling expence; but there they learn very little. Generally, a bed of sand serves for paper, and a finger, or a piece of stick, for pen and ink; consequently, no traces of any instruction remain for the future consideration of the pupil. The more affluent, and the more zealous, ordinarily provide their children with a board, about a foot long, and nine or ten inches wide, which, being painted black, and varnished, becomes an admirable tablet, whereon the young folks are enabled to write their lessons with a reed pen; the ink being generally chalk and water. To

these, though certainly more perfect than the former mode, the same objection exists; namely, that they want stability, and that the lesson is no sooner repeated by rote, and written much in the same manner, than it is forgotten, at least it never again obtrudes on the eye; since, in order to make way for further instruction, it is necessarily expunged.

The *koits*, or scribes, and the *lâlahs*, or accountants, (though the latter often confine their occupations to merely reading or transcribing,) are nearly the same among the lower classes, especially where the Naugry character is in question, that the *moonshies* are among the superior orders, who, almost invariably, use the Persian language and character, in all public, as well as in private, matters. So far, indeed, is this carried, that Persian is held to be both the language of the Court, and of the Law.

As those who study the Persian are aided by *moonshies*, so are such persons as would acquire the Naugry character necessitated to employ *koits*, or *lâlahs*, for that purpose. The wages of these may be from two to five rupees per month; but, in some families, the servants contribute to the extent of a few annas, or, eventually, as far as a rupee, in the aggregate; in consideration of which *douceur*, the *lâlah* commonly writes letters for them to their friends, and explains the answers, &c. Such servants as

have the charge of oney to be disbursed on master's accou nmonly take care to be on good terms w s *cullum-burdar* (*i. e.* quill-driver); w has been said of *compadores*, generally takes all items he knows to be over-charged, by a small deduction in his own favor.

Persons of this class often keep little schools, such as have been described, and then are designated *gooroos*; a term implying that kind of respect we entertain for pastors in general.

If we contemplate the extreme inattention prevalent throughout Hindostan, respecting literary attainments, and the great cunning practised by the priesthood, in their sedulous endeavors to prevent the natives from receiving the least information regarding philosophy in general, it must appear surprizing that so much has been done by the artizans of Bengal towards the adaptation of their labors to the convenience of the British residents. Our admiration of these people cannot but be heightened, from the circumstance of particular trades being confined to particular *casts*, or sects; for though we may, possibly, at first view, consider that to be an advantage, inasmuch as it should seem to perpetuate knowledge in an hereditary line, those who have resided in the East fully know that no such heir-loom ability is to be found: on the other hand, we immediately recognize the bar raised against genius; which, when to be found

within the *cast*, may struggl for ever under some base, forbidding, and loath gradation; or, if it should start in anothe annot adopt its native intention, but must in favor of some other pursuit, perhaps requiring no genius; or, eventually, one of a very different bent. Once a carpenter, always a carpenter; once a swine-herd, always a swine-herd!

The evil effects attendant upon the useful arts in general, from such a system, are certainly great, but by no means to be compared with the degradations, and consequent imbecility, inseparable from the total suppression of every thing tending to excite emulation. When we see an hereditary priesthood, and that, too, by no means remarkable for the paucity of its members, we cannot but picture to ourselves the arrogance thus privileged in the whole of that tribe, and the humiliation which marks the actions, as well as the sentiments, of all who do not stand within the hallowed pale. Such a contrast can exist only while one party can deceive, and while the other deems accusation to be nothing less than blasphemy; therefore we cannot be mistaken regarding the only means of correction: to wit, a knowledge of the world, and of its inhabitants; or what we, in other terms, call learning. Pour but a little of this into the minds of a certain number; satisfy them that morality in Europe, and morality in Asia, are the same

thing; that 'whether we do our duties in a black skin, or in a white one,' matters not; that men were born to aid each other, and not to be made the slaves of party, sect, or color; and, that he who knows most regarding the works of the Creator, is most likely to have a proper sense of his bounty. Convince the natives of India, or of any other nation, that such is the truth, and that you practise, while you teach, the doctrines of Christianity, and nothing will, in the end, be able to stand against so formidable an attack. But if we proceed, as has been too rashly done, to attempt a schism among them by mere declamation, or by means of creeds and parables in which they have no belief, (merely because they know no better,) our object will be either mistaken, or designedly misrepresented; and we shall experience in Asia all those penalties that formerly awaited the avowal of Lutheranism in Europe! In brief; convince the natives that their priests are fools and knaves, and that poverty, disgrace, and even disease, are the consequences of a mistaken bigotry, and the whole country will prostrate itself at your feet!

Waving every other objection, and resting solely on the very inadequate means of instruction afforded by parents to their children, through the medium of *koits*, *lâkihs*, and *gooroos*, it seems probable that, unless some effectual reform

may take place, the natives of India are likely to remain in darkness, *ad infinitum*. This is the more to be regretted, when we consider how willing they are to follow such means as may be offered them, provided those means may not oppose established principles, nor be contrary to their ideas of sanctity and benevolence. Nor can we but repine at such infatuations among a race whose intellectual qualities, whatever may be said by ignorant or designing men, are at least on a par with those of Europeans. That they are perverted, will not be denied; but, that they are naturally imperfect, needs little proof indeed! Set some dozens, or scores, of our youths to bellow in unison, (with all the *ennui* attendant upon monotonous rote,) any particular passages from the Scripture, day after day, and year after year; and, after some seasons, search among them for Newtons, Lockes, Blackstones, and Solons! The result need not be told!

In recommending to those of my readers who may be intent upon acquiring a knowledge of the language, (by which I mean not only the Bengallee, and the Hindui, both of which may be considered vernacular, but the Persian also,) to purchase such translations as may be extant of the works of Indian authors, I am far from being partial to their contents, and disclaim the idea of affording any thing more than exercise in trans-

lation when I do so; for there appears to me a great disposition to trifle, or to the hyperbole, in all I have ever seen. By means of such translations, the originals may be more readily understood, whereby the study may be rendered both brief and pleasing; provided proper attention be paid to all material points, and that, in reading the translation, the student does not indulge in the erroneous opinion that he is making himself master of the original. Almost every book written in the East is the production of some court sycophant: a few have resulted from the labors of men who, being disposed to meditation, have committed their reveries to paper; and, a very small portion have displayed such scintillations of ability, as leave us to regret they were either not better educated, so as to enlighten their countrymen, or that they were not born in those parts of the world where their talents might have been fostered, and duly appreciated. With regard to ethics, numbers have amused themselves, to all appearance, more from ostentation than from 'being virtuous over-much.' The facility with which scraps from the Koran, (*i. e.* the Bible of the Mahomedans,) may be set forth in glowing terms, in a language rich in expression, has, no doubt, induced many a very tolerable lay-man to annoy his neighbours, by the repetition of page after page of the most tiresome tautologies,

whereon his fame has been built: of this description abundance exist, all alike unworthy of review.

I have always thought the poets of India to be particularly happy in those little tales which convey a moral, though a very worldly one, under some alluring allegory. From this, however, I exempt the celebrated HEETOPADES, translated by Mr. Wilkins. This, by general consent, is allowed to be the store from whence *Pilpay's Fables* have been taken; but the original can never appear in competition with their offspring; for, while the latter are interesting, and afford a very rich treat, by their apt application to the affairs of life, the former are heavy, dull, tedious, and of a most motley character; the subject is generally forced, and spun out into all the varieties garrulity could invent!

The Asiatic student may find, in the several works of Gilchrist, Baillie, F. Gladwin, Sir. W. Jones, Sir William Ousely, Richardson, and Wilkins, abundance of instruction in the several languages most current in Hindostan; the Asiatic Researches will give him a considerable insight into a number of interesting and important matters relating to the natural history of the East, the manners, and the climate under consideration; while, by means of Colebrooke's Digest of the Hindu Laws, and Rousseau's

Dictionary of Mahomedan Law, he may become very generally acquainted with that important branch of knowledge. With respect to the politics of the country, they have been so much canvassed, that various treatises on that topic are to be had: unfortunately, all are either devoted to partial considerations, or written to serve a party!

In almost every country, whereof the inhabitants are either considered by their neighbours, or deem themselves to be, civilized, the records of the state, the several libraries, whether scholastic, traditionary, scientific, or amusing only, are open to the inspection of persons of all nations; and, above all, the sacred institutions are subject to visitation, and even to research. In India, no such recreation or benefit is ever afforded to the inquisitive traveller, who may remain, for years, within a stone's-throw of what, to him, would appear an invaluable treasure, without his being able to obtain the smallest indulgence in aid of his pursuits. Whatever may be the complaints against our continental neighbours on the score of persecution, we must give them credit for the most ample toleration of the million of visitors who intrude on their several cabinets, libraries, &c.; some, from the most laudable motives, others, actuated by the mere desire of seeing all that is to be seen, without, in the least, regarding those

points by which the philosophic eye is naturally attracted. Though so heavy a charge lies against the Hindus, on account of their strict rejection of our countrymen, in general, when application has been made for information on particular points, it must be allowed, that they doubtless have, in a few instances, been more explicit, and furnished information on particular topics, which, to us, has proved extremely interesting.

In truth, we have no exclusive right of complaint; for all nations, and all sects, except their own, have been equally subject to denial; or, when indulged, have been compelled to perform some ceremonies obnoxious to their faith, or to their persons. Whether this be absolutely necessary, or has been devised solely with the intention of deterring the curious, may not be difficult to determine; thus much we know, that, in order to obtain admission to a knowledge of certain forms, or to the perusal of certain records, various operations, amounting nearly to apostacy, though no recantation be made, must be performed.

There is room to doubt whether any true accounts of the antiquity of the Seek College at Benares, and of the migrations of the Hindus from the countries bordering on Palestine, actually exists: many persons, of considerable talents, and of great erudition, are disposed to

treat the whole of what has been delivered to us, with so much solemnity, by the *Pundits*, or learned Brahmans, as a deception, intended to ridicule our curiosity, and to repress, or at least to divert, it from the true course. Circumstances may be adduced in support of this hypothesis; and we cannot but regard the manner in which the *Pundits* arrogate to themselves the whole knowledge of their history, which is carefully concealed from a large portion even of the Brahmans, as a circumstantial proof of our having been designedly led astray, both by a fictitious record, and by a well concerted fable, invented for the occasion: this may be aptly compared to the whale and the tub. Fortunately, no material point appears to rest on the antiquity, or otherwise, of the Hindu mythology, or the records of the Seeks, regarding the origin of that people; though it would perhaps be found, that their true exposition might tend to afford many proofs in favor of the mission of our Saviour.

When the immense extent of territory we hold in India is considered, and, that perhaps no country in the world offers greater facilities, not only for literary correspondence, but for the researches of naturalists, the conveyance of gross articles, and the manufacture of raw materials, which every where abound, we cannot but lament the want of such institutions as might

enable us to turn such important advantages to the immediate benefit of Great Britain, on the most unbounded scale. We are absolutely ignorant of a million of facts now included, either directly, or by affinity, in our endless catalogue of desiderata, which need not remain in that disgraceful list, provided due means were taken to correct our errors, and to extend our resources. During the dry season, or at least for four months in the year, scarce a part of the country opposes the progress of a traveller; unless through those immense wildernesses already described. It may, on the whole, be said, that one half the country is passable at all seasons by land; though the progress will doubtless be slow, and difficult, during the heavy falls of rain. Intercourse is never at a stand. The *dawk*, or post, proceeds at all seasons; and is rarely more than two days longer on its way from Calcutta to the upper provinces, than at the favorable time of the year. Bridges and ferries are found on all the great roads; whereby regiments have occasionally marched on emergency with such despatch, as could scarcely have been exceeded even during the hot season.

The communication with Europe, overland, has been established, during peaceable times, for full twenty years; but it was not until about twelve years ago, that the public have been per-

mitted to avail themselves of so essential a means of correspondence at fixed rates, and under particular regulations. Prior to that period, the Company used to receive, and to despatch, packets overland, in which occasional indulgences were granted to favored individuals. I abstract this from the very old custom of sending intelligence, on sudden occasions, by the despatch of some confidential person to or from India. The utility of some permanent and certain conveyance for letters from a quarter daily becoming more opulent, and more important, cannot be doubted; were it only for the purpose of transmitting bills of exchange payable after sight, the notices of bankruptcies, the information of intended consignments, the state of the markets, &c., such a systematic communication must be invaluable to the several merchants. To the Government it is of the highest importance! Many complain of the heavy rates of postage overland, and others of the severe restrictions; but such complaints are ill founded: the expence of the posts is very heavy, and it is indispensably necessary for Government to hold a severe check over whatever intercourse might lead to mischief.

The tables of postage, and of *bangy* carriage, contained in the Directory, will enable the reader to judge how far the charges are from being exorbitant: he will not fail to recollect,

that the sums paid in Britain are very trifling, owing to the immense intercourse subsisting between the several parts of the kingdom, far beyond what exists in any part of India. Bath is the same distance from London that the cantonments of Berhampore are from Calcutta, viz. 106 miles: the former pays 8d. postage, the latter 4 annas, which is about the same sum: the other charges are considerably cheaper; viz. Allahabad, which is full five hundred miles from Calcutta, pays only 7 annas (about 13½d.); but this is on the great road, while the other is scarcely to be considered a thoroughfare, compared with what it was before the new road was cut through the Ramghur district to Chunar.

With the exception of such parts as may be infested by tigers, the post seldom or never fails of arriving within an hour of its appointed time; except, as has been observed, when the waters are out; in which case, many circuitous roads must be followed, whereby the way is considerably lengthened in the aggregate. Taking the average, a hundred miles per day may be run over by the *dawk*, or post, in fair weather. Each mail-bag is conveyed by an *hirkarah*, (or runner,) who is attended by one or two *doogdoogy-wallahs*, or drummers, who keep up a kind of 'long-roll,' as they pass any suspicious place. Ordinarily, two *mosaulchees*, or linkbearers, accompany each *dawk*; and, where

tigers are known to commit depredations, one or two *teerin-dauzes*, or archers, are supplied, under the intention of protecting the party. But such puny aid is of no avail; for the onset of the tiger is too sudden, and too discomfiting, to allow any effort of consequence to be timously adopted: the very act of seizure is a death-blow, from which I never heard of any recovery; provided the unhappy victim were not so particularly situated as to prevent it from decidedly taking effect.

Here it may be needful to explain, that a tiger invariably strikes his prey with the fore paw, in so forcible a manner as often to fracture the skull; which, generally, is the object aimed at: many oxen have had their cheek bones shivered by the contusion. It sometimes happens, that the marks of one or two claws are to be seen, but they are generally *en passant*, and by no means the result of primary intention. The wrist of a tiger being often nearly two feet in circumference, may give some idea of the violence with which the *coup de grace* falls on the head of a human being! The *mosauls*, or *flambeaux*, are intended to intimidate the tigers, as are also the *doog-doogies*, but experience has shewn that, when hungry, tigers are not to be restrained by any such device: indeed, instances have occurred of the *mosaulchees* themselves

being carried off. It would, nevertheless, be presumptuous to judge from such partial data, that many tigers are not deterred by the noise and fire accompanying the letter-carriers; on the contrary, there should rather seem a probability, that many young tigers, or such grown ones as may not be hungry, nor be attended by cubs, are frequently intimidated from those attacks they would make but for these precautions. A residence of two years at Hazary-Bang, the station for a battalion in the Ramghur district, enabled me to form a fair estimate of the dangers to which the *dawk*, and travellers in general, were subject. During some seasons, the roads were scarcely to be considered passable; day after day, for nearly a fortnight in succession, some of the *dawk* people were carried off, either at Goomeah, Kannachitty, Katcumsandy, or Dungaie; four passes in that country, all famous for the exploits of these enemies to the human race!

So few valuables are ever sent by the post, that thieves never attempt any depredations on the letter-bags. *Hoondiés* (*i. e.* banker's drafts) would be of no use whatever to them; and as bank notes are not in general currency, no object is held out for enterprize of that description. Nor do the *dawk-bangies*, or parcel-dawks, offer any substantial inducement; for, even if any plate, or watches, or trinkets, were to be sent by

such a conveyance, the want of a market, and the impossibility of confiding in any village jeweller, would render the act both hazardous and unavailing. Hence, the *dawk* generally proceeds in perfect safety, throughout every part of the country; while the *bangies* may be considered equally secure; except, indeed, in some parts of the dominions of the Nabob Vizier of Oude, where a lawless uncontrolled banditti subject every passenger to contribution: this evil is fortunately on the decline, in consequence of our having assumed the reins of government.

It has frequently been asked why, in a country so completely under our control, we did not establish mails, similar to those in use throughout England. Before this can be effected, an immense revolution must take place, not only in the minds of the natives, but in the features of the country. At present, there appears no desire on the part of the inhabitants to communicate by land, farther than may be necessary for the purpose of attending *hauts*, (markets,) *maylahs*, (fairs,) or for the resort to certain places of worship, &c. For such purposes, a pedestrian trip suffices; or, at the utmost, a poney, worth only a few shillings, is either borrowed or hired. The contact of various *casts*, or sects, being considered a pollution, it is not to be supposed that a Hindu would like to be pent up, for hours

together, with a Mahomedan, who makes no scruple of killing and eating a cow: or that the Mussulman would, in his turn, feel comfortable under similar circumstances, with a British *kaufur*, (unbeliever,) who, besides his condemnation of the prophet, makes no scruple of devouring ham and bacon wholesale! Admitting that all parties should be agreed to associate within the body of a stage-coach, still there would not exist intercourse sufficient to support the expences, in a quarter where horses are so dear, and where the necessary repairs could not, in case of accident, be promptly effected. Then, again, the roads must be suitably made, at an enormous expence, and be afterwards supported by heavy disbursements, or by a contribution of labor on the part of the land-holders, by no means agreeable to their feelings. All this may, in time, pass under a complete metamorphosis: the produce of the country will be more generally estimable; the people will relax greatly from the vigorous attention now paid to religious tenets; and, as their prejudices may give way to their true interests, will extend their speculations without fear or restriction. Those who may then inhabit India, will see roads, mails, and inns; whereas, at present, there are only pathways and runners, but no inns. There are, to be sure, *seraies* and *choultries*, for the accommodation of travellers, but these are mostly going

fast to decay; and, at the best, can be viewed only as shelter for men and cattle; goods being usually left exposed to the weather. The *by-tearens*, or female cooks, who ply, in more than one capacity, at such places, and who, on receiving money before-hand, buy and cook such victuals as may be ordered, or the place may afford, cannot be considered otherwise than as menials, and not to be classed with our inn-keepers; no, nor even with the poorest village retailer, '*Lysunst to del in T, Koffy, and Tibaky!*'

There is, however, a wide field for practical improvement; as may be fully understood from the following statement. The *dawk* rarely travels at a less expence that twenty-five rupees per month, for each stage of eight miles (four cosses) on the average. This sum is absorbed by a *moonshy* at each *chokey*, or relief at the end of a stage, who pretends to be very scrupulous in regard to ascertaining that all the parcels are right, but who, as I have repeatedly witnessed, is more intent on receiving little presents of *ottah*, (meal,) spices, &c., sent to him from the neighbouring villages, in return for letters conveyed by the *dawk-hirkarahs*, who are sometimes laden pretty heavily with such contributions. I speak from what I have been an eye-witness to repeatedly; as to hear-say, much more might be asserted. It appears to me that the

above sum would carry on the system with double the speed, and double the efficiency. In lieu of sending off four, five, and six, men with the *dawks*, let a horseman convey the bags for about twelve miles, on an allowance of fifteen rupees per month for man and horse; and, during the rainy season, when the roads are deep, let a fresh horse be allowed for the several returns, instead of causing the same man and horse to return with the *counter-dawks*. On the above allowance a very good steed might be kept, the celerity of the *dawk* would be greatly encreased, and there would be no occasion for *moonshies*, except at such *chokies* as might be upon diverging roads, where it would be necessary to have the proper parcels sorted out, and delivered to the various *branch-dawks*.

Travelling in a *palanquin* by *dawk*, (*i. e.* post,) is effected much in the same manner as the despatch of the *dawks*. Bearers are stationed at the several stages, for the purpose of relief; each station, in general, supplying eight bearers, and a *bangy*, in all nine men, together with one or two *mosaulchies* for night stages. The expence of travelling in this manner will depend greatly on the distance: if only a short journey is to be made, such as may be compassed within eight or ten hours, nothing more is needful than to send on a set, or two, of bearers, who then receive their daily hire of four annas (8d.) each,

while out from home; or, if there should exist the means of so doing, a *hirkarah*, (or messenger,) may be despatched to collect bearers at the several stages. In this manner, the relays may be properly supplied, and the cost will not amount to more than a rupee for three miles; equal to ten-pence a mile; whereas, in the ordinary mode of having bearers laid by the postmaster, each mile will cost full one rupee, (*i. e.* 2*s.* 6*d.*,) besides various little disbursements by way of *buxees*, or presents, to every set of bearers in the journey: these may be fairly estimated at two rupees for every set, or relief, which, if the distances run by each should average ten miles, will be about twenty rupees (£2. 10*s.*) for every hundred miles. The ordinary rate of this kind of conveyance may be rated at four miles per hour during the cold season, three and a half during the hot season, and from two to three during the rains, provided the waters are not much out: otherwise, no estimate can be formed. The above includes stops.

The establishment of *dawk-bangies* for the conveyance of parcels, at rates in proportion to their weights respectively, has produced considerable convenience to those who reside at a distance from the Presidency. Until this plan was adopted, few could send small articles, such as trinkets, &c., to the Presidency, but

under favor of some individual who might perchance be travelling thither, and who might possibly be some months on the way: the same inconvenience attended the return; so that it was not uncommon for a gentleman whose watch required inspection, to be four or five months deprived of its use. This is now done away, and a watch, &c. may be sent from Cawnpore to Calcutta, there undergo repair, and be returned with ease, in the course of a month, or less.

The same kind of convenience is, of course, afforded regarding books, and all other articles too bulky, or too heavy, to proceed by the *dawk*, but not of sufficient importance to induce the employment of a boat, or of a *bangy*, to convey them: nor, indeed, could a single bearer travel with a *bangy* more than twenty miles within the twenty-four hours; so that he would be full a month in going from Calcutta to Cawnpore; whereas, the *dawk-bangies* travel by relays of bearers, therefore can almost keep up with the *dawk-hirkarahs*, who carry the mail-bags suspended at the end of a stick over their shoulders.

The communication by water between Calcutta and the several subordinate stations, whether civil or military, is much resorted to; during the rainy season in particular. At that time, few are inaccessible to craft of some description, though but for a while: those immense falls of

rain which cause the ravines to fill, and every little creek to become navigable for boats of ten or fifteen tons, swell the Ganges, and the other great rivers, to an astonishing height; causing them to run with awful velocity. The rivers generally rise in May, but a few inches only, in June, they often approach the summits of their banks, between which they fluctuate, rising and falling until the great swell, which takes place in August. Sometimes the river rises twice, sometimes thrice, or, even four times, during the season; but, in general, one ample inundation serves all the purposes of agriculture, provided the rains do not afterwards abate too suddenly in September, before the rice is cut. When such an untimely cessation takes place, it is attended with great mortality: the immense expanse of slime, suddenly exposed to the influence of the sun, then on the equinoctial, throws forth the most destructive miasma, whereby epidemics, of the most dangerous description, are propagated.

The swelling of the great rivers is a matter of great uncertainty; sometimes they rise very early, before the quantity of rain that falls in the lower provinces could lead to the expectation of their doing so: when this is the case, it is not uncommon to see the Cossimbazar river, commonly called the *Baugrutty*, nearly dry at night, and full twenty feet, or more, deep the

next morning. In other seasons the waters are very tardy; a matter of serious moment to the husbandman, who is naturally anxious to plant his crop of rice in due time, so that it may be securely attached to the soil before the great inundation comes on. The growth of the rice stalk is certainly one of the most curious proofs of nature's adaptation of that plant to the situation in which it is cultivated; namely, in the water: it will not thrive unless the stem be immersed for several inches; and, owing to the formation of its stalk, which draws out like the concentric tubes of a pocket telescope, it can put forth many feet in the course of a few hours, so as, apparently, to grow as fast as the water may rise, and to keep its pannicle from being overflowed. It is by no means rare for the rice stalks to shoot forth from five to six feet during the twenty-four hours: I have *seen* it do much more!

In parts subject to the regular annual inundation, all the villages are built on rising grounds: many stand on artificial mounds, formed by excavations around their bases, so that they are surrounded nearly by moats, in which their *dingies*, or small boats, are immersed during the dry season, and affording admirable refreshment to their buffaloes during the summer heats. But it sometimes happens, that the waters rise to so great a height as to endanger even these elevated

villages; some of which are then completely inundated. To avoid this, most of the houses are built upon piles, or stakes, thereby to raise their floors from four to six feet above the ground, and open enough to permit the waters to pass through with freedom. In the dry time of the year, the cattle are occasionally kept within the areas thus enclosed under the floors; but, while the inundation is at its height, so as to insulate a village completely, all the live stock are kept in boats moored around it, where they are fed by a species of the *doob*, or *doop-grass*, dragged up from the bottom of the waters by means of split bamboos, made to serve as forks: but for so providential a supply, the cattle must be led scores of miles to some part of the country, whose elevation exempts it from inundation.

The mention of a country being so completely under water, cannot but cause considerable surprize. The fact is, however, too well known to be disputed. Even at Berhampore, which is not considered within the ordinary verge of inundation, it is common to see boats of great burthen, perhaps fifty tons, sailing over the plains, as through a boundless sea. As to the country lying between the mouth of the Jellinghy and the debouchures of the Ganges, that is always overflowed for full three months, perhaps to the average depth of ten or twelve feet. I have sailed over it full a hundred miles by the com-

pass; aided, indeed, by some remarkable villages, mosques, banks, &c., well known to the boatmen, who, probably from their earliest days, had traversed the same expanse during every rainy season.

Were it not for the water being strongly colored, and the strength of the current, it would not be easy in many places to distinguish the great rivers which are crossed in steering through this fresh-water ocean: the water of the inundation is generally of a bluish tinge, derived from the quantity of vegetable matter at the bottom, of which a certain quantity decays, and partially taints the fluid. A large portion is concealed by the *d'haun*, (or rice,) which rises above its surface. This, in the first instance, bears the appearance of a long grass, of a rich green, rising above the surface, so as to be mistaken at a little distance for *terra firma*: gradually, the pannicles shoot forth, of a pale-dun color, turning, as they ripen, to a deep dun, or light clay.

The grains of rice, which are called by Europeans '*paddy*,' retain the name of *d'haun* so long as in their coats; as we often see a few grains among the rice imported to us; these coats are peculiarly harsh to the feel, and are fluted longitudinally, so that no water can lodge upon them. Each grain is fastened to a short stalk, joining to a main stem, and furnishing a very pleasing bunch of grain, not very

dissimilar to an ear of oats, but far richer, both in color, and in quantity. Rice has no husk or chaff; therefore is easily separated from the straw, which is eaten by cattle when no other provender can be had, and makes excellent litter, it being very long and soft. Where the inundation prevails, the straw is of little use: the grain being cut in boats, and the straw settling at the bottom as the waters subside; thereby adding to the natural fertility of the soil. In the more elevated parts, the straw is cut the same as in the *rubbee*, or corn crops, and bundled for domestic purposes: there, its length rarely exceeds two feet, whereas, among the inundations, it is often seen from fifteen to eighteen feet in length. The head, or pannicle, generally bears from a hundred and fifty, to three hundred, grains of rice.

Two modes of clearing rice from the shell are in use; the one performed by the very simple process of scalding, which occasions the rice to swell, and to burst the shell, so that the latter is removed with very little trouble; the other is, by putting the *d'haun* into an immense wooden mortar, called an *ookly*, and beating it by the application of two or more beetles, called *moosuls*, of about four feet in length, by three inches in diameter, shod at the bottom with iron ferules, and thinned towards their centres, so as to be grasped by the women; each alter-

nately impelling one, in nearly a perpendicular direction, among the *d'haun* in the *ookly*. After the shells have been duly separated, the rice, now called *choul*, is separated, by winnowing either in a strong draught of air, or by means of a kind of scoop, made of fine wicker-work, called a *soop*, wherewith the native women can most dexterously separate different kinds of corn, and effectually remove all rubbish. The coat of rice is peculiarly harsh, and not much relished by cattle: I have seen it mixed with dung for fuel with excellent effect.

The natives, in general, make little distinction between the rice separated by scalding, which is called *oosnah*, and that dressed by the *ookly*, which is called *urwah*; but some of the more fastidious prefer one or the other, according to particular prejudices handed down in their families, or supposed to appertain to their respective sects. I think the scalded rice generally deficient in flavor; the grains are larger, and less compact; the beaten rice certainly boils with rather more difficulty, but appears whiter, and drier. The scalded rice does not immediately separate from the coat, but is usually submitted to the operation of a machine composed of a stout beam, nearly equipoised by means of a thorough-pin, on a fork, of wood also, fixed in the ground.

It is inconceivable what quantities of rice, of

a coarse reddish cast, but peculiarly sweet, and large grained, are prepared, about Backergunge, near the debouchure of the Megna, for exportation. In that quarter fuel is cheap, and water conveyance every where at hand; so that the immense crops raised in the inundated districts find a ready sale. The average return from a *bigah* of 1600 square yards, of three *bigahs* to our statute acre, sown with about twenty-five seers of *d'haun*, may be taken at nine maunds. The price of the grain, when cleared of its coat, may be from thirty to forty seers of fine rice, and from sixty even to *a hundred and twenty seers* (*i. e.* three maunds) of coarse, commonly called 'cargo-rice.' But the demand always regulates the value; especially when great consignments are forwarded to the coast of Coromandel.

Large quantities of rice are usually cleared by contract, the operator receiving the grain at the door of the *golah*, or warehouse, where he sets up his cauldron and machines, and returning twenty-five seers of clean rice for every maund (forty seers) delivered to him; he finding the fuel, and reserving the husks. In a country where labor is so very cheap, it is not so very necessary to have recourse to mechanical devices for the purpose of diminishing the expence of such operations; yet it occurs to me, that, were tide wheels to be used at Backergunge and elsewhere, or a floating mill, like that moored

between Blackfriars' and London Bridge, to be made out of some condemned hulk, an immense advantage would be gained in regard to time. By the proper adaptation of machinery, whereby the rice might be hoisted in, or lowered down, either by the force of water, or of steam, and the beetles be properly worked, the grain might certainly be prepared for market in less time, and infinitely less charge for *cooly* hire, in landing, loading, &c.: should this hint be well received by any speculating European, it might tend to lower the prices of rice at those times, when, either from want of laborers, or from the expediency of shipping off with as little delay as possible, the saving of a few days might prove an object of importance. At all events, the work might be done more regularly, more frugally, and more independently, than by manual process.

The rice grown in the low countries by no means equals that produced in the uplands, where it is cultivated with great care, and subjected to many vicissitudes in regard to the state of moisture in which its roots are retained. In many parts of the most hilly districts *d'haun* is to be seen in every little narrow valley, winding among the bases of those stupendous eminences from which the torrents of rain supply a superabundant flow of moisture at one time, while, at others, only the little rills proceeding from boggy

springs seem to feed the artificial pools in which the growing plants are kept in a state of semi-immersion, by means of small embankments made of mud. In every instance the *d'haun* is to be kept duly watered; else it withers, and becomes unproductive. In order to preserve the water as much as possible, the bed, or level, nearest to the springs, is raised as high as can be afforded, and its exterior border banked up, to about a foot and a half, with soil: the next level may be from a foot to a yard lower, and receives the overflow; which is again passed on to the next lower bed; and thus, in succession, for perhaps a mile or more; the ends of the beds requiring no embankment, on account of the land rising on either side. Such situations afford a certain crop in ordinary seasons; and, if the rains should fail, the dews falling on the adjacent hills, generally covered with jungle of some kind, ordinarily afford moisture enough to keep up the springs, thus causing sufficient dampness to prevent the rice from perishing, before some ample showers may again float the whole of the irrigated cultivation. Rice thus produced is commonly small in grain, rather long and wiry, but remarkably white, and admirably suited to the table. The natives, though they admire its appearance, are not partial to it; they generally preferring the larger-bodied grain, with a reddish inner rind, which does not readily separate, when

new, from the rice: this kind, as I have before expressed, is assuredly the sweetest, and is, on that account, preferred by those who distil arrack.

Remoteness from the sea air is said to be the reason why the up-country rice possesses less saccharine matter than that grown near the sea-coast, and among the inundation; but this appears an erroneous judgment. There is, no doubt, a great encrease of saccharine matter in plants (of the same genus) cultivated on spots well manured: now, few, if any, of the places devoted to the cultivation of rice in the upper country, receive much aid from manure; nor are they, in general, subject to the reception of nutritious particles, such as are either floated down, or are engendered and deposited by, the inundation, which may be viewed as the grand depôt of whatever can enrich the soil. When we look to the large tracts of plain, not subject to such an immense flow of feculous moisture, but seeming merely as reservoirs for the retention of local rains, we shall then see, that the superior sweetness of the rice produced about Backergunge, Dacca, Hajygunge, Luricool, Mahomedpore, Comercolly, Jessore, &c., is to be attributed solely to the superior fatness of the soil, on which the most luxuriant crops of cotton, and of esculents, are raised during the dry season. When the soil is fresh turned up for the second crop, it is gene-

rally very offensive, and, doubtless, by no means favorable to the health of the cultivators, who, at that season, (commonly in November, December, and January,) are subjected to very obstinate agues.

Rice is very subject to the weevil, which often multiplies among it so fast, as to threaten destruction to the whole depôt. The natives have recourse to a very simple preventive; viz. by placing one or two live cray-fish within the heap: their effluvia quickly expel the predatory tribe. Here we have a question for naturalists and philosophers; a question pregnant with interest to the agricultural world, namely, 'Whether there is any particular, and what, property in a live cray-fish, that produces this effect upon insects under such circumstances?' Whatever may be the cause, the effect is well known; therefore the enquiry is so far forwarded as to furnish data, or at least hints, respecting those results which might be expected both from marine productions, and from other living bodies. The inhabitants of the lower provinces are chiefly Hindus; therefore, owing to religious tenets, by which they are led to consider almost every animal as unclean, few experiments could be expected to take place among them; otherwise, we might probably have found that any living animal, such as a rat, a frog, &c., if confined in a small box, and

placed within a heap of rice infested by weevils, would produce a similar effect. Rice is by no means subject to this species of depredation when in the coat, that is, in the state called *d'haun*, but the natives are averse to retaining it in that form, because the grains shrink considerably, and, when beat out for sale, do not occupy so much space as when exposed to the air. Hence, it is an object with the rice-merchants to dispose of their crops before the month of March, unless the markets may be so glutted as to cause that grain to sell, as it has in some years done, at such low prices as could not fail to ruin the farmer. It has been known so cheap as seven and eight maunds (equal to seven cwt.) for a rupee! When this happens, such merchants as have the command of money rarely fail to make immense fortunes. Many have been known to possess four or five lacs of maunds!

Rice is the most common article of food among the natives, whether Hindus or Mussulmans, throughout the lower provinces, where it is to be found in far greater abundance than corn of any description. The inhabitants of the upper provinces, where wheat and barley are cultivated to such an extent as to be sold in the retail for about a rupee and a quarter, and a rupee, respectively, subsist chiefly on the meals of those grains; which, being well kneaded with water, are made into *chow-patties*, or *bannocks*, are baked

at the common *choolahs*, and are both palatable and nourishing. The natives hold an opinion that rice is very injurious to the sight; but, I believe, whatever injury may arise from its use proceeds entirely from eating it too hot, and in such quantities at one meal, generally about sun-set, as can scarcely fail to injure the stomach. Barley-meal is considered, and with great justice, to be very nourishing, but heating; therefore most of those who prefer *ottah* (meal) to rice, use that made from wheat. Large quantities of rice are carried upwards, towards the Nabob Vizier's dominions, where it sells to great advantage; while, on the other hand, immense consignments of corn, chiefly wheat, barley, and *r'hur*, are made from those parts towards the lower districts; where they are consumed by all classes of persons. While the *Baugrutty*, (*i. e.* the Cossimbazar river,) and the *Jellinghy*, both of which branch from the Ganges, and, uniting at Nuddeah, form the Hoogly, which passes Calcutta, are open, boats of all kinds proceed that way; but chiefly through the former channel, on which Moorshadabad, Berhampore, Cossimbazar, and Jungypore, are situate. This is the shortest line of communication by water between the Presidency and the upper provinces; but, unfortunately, it is open only for about six months in the year; it rarely having water before the middle of June, and

being commonly reduced to a very low ebb by the middle of December; though, in some years, it remains navigable for small boats for a month or six weeks longer. It may, indeed, be passed in such all the year through, provided they be dragged over the shallows, which, often for a mile or more, oppose the progress of whatever may draw more than a few inches of water: in such case, the bottom of a boat should be good, otherwise she may be strained by the immense exertions of perhaps fifty men, who, ranging along either side, and dragging by means of ropes, as well as by pushing and lifting behind, force her along the shallows, and thus pass her over all the more prominent obstacles. I have, more than once, had a very small *pulwar-budjrow* navigated, if I may so call it, down the *Baug-rutty*, from Mohanahpore, at the mouth of that river, as far as Berhampore; which, by land, is full forty miles, and, by water, cannot be less than seventy. But there are so many bars, or shoals, between Berhampore and Augah-Deep, about thirty-five miles by land, lower down, as to render that part absolutely impassable, except when the river has an average depth of two feet, or two feet and a half.

During the dry months, the whole of the commodities transmitted from the upper provinces to the Presidency, with the exception of some few articles of small compass, which may be

landed at Bagwangolah, and proceed to Augah-Deep overland, are sent down the Ganges for the purpose of proceeding through the *Soonderbunds.* This highly interesting, but difficult navigation, reaches from the Megna to Calcutta, near to which a canal offers to adventurers a safe and easy communication between the Hoogly and the Salt-Water Lake, which lies at the back of Calcutta. The generality of trading and passage vessels proceed by this cut, paying a moderate toll, either on the tonnage of the former, or the number of oars of the latter. But the salt vessels despatched from Joynaghur, &c., with the produce of the different pans in that quarter, commonly take the lower passages near *Chingree-Cauly*, and *Culpee*, which are by far the most dangerous, though rather more direct.

The *Soonderbunds*, or *Sunderbunds*, consist of an immense wilderness, full fifty miles in depth, and in length about a hundred and eighty miles. This wilderness, which borders the coast to the water's edge, forming a strong natural barrier in that quarter, occupies the whole of what is called the Delta of the Ganges; every where intersected by great rivers, and innumerable creeks, in which the tides are so intermixed, that a pilot is absolutely necessary, both to thread the intricacies of the passage, and to point out at what particular parts the currents will, at certain times, be favorable in proceeding either to the eastward

or to the westward. In many places there is scarcely breadth for the passing of a single boat, and even then the boughs of the immense trees, and of the subordinate jungle, frequently are found so to hang over, as nearly to debar the progress of ordinary trading vessels. Fortunately, these narrow creeks are short, or, at least, have in various parts such little bays as enable boats to pass: one or two are, however, so limitted throughout in point of width, as to render it expedient that musquets should be discharged before a boat proceeds, in order that others may not enter at the opposite end of the narrow: but for such a precaution, one of them would be compelled to put back. The water being brackish, or rather absolutely salt, throughout the *Sunderbunds*, it is necessary for all who navigate this passage, to take a good stock; calculating for at least a fortnight's service. Even the villages, which here and there are to be found on the banks of the great rivers, are sometimes supplied from a great distance; especially during the dry season, when the tides are very powerful.

The regular trading vessels, which pass through the Sunderbunds, perhaps every month, or two, are usually provided with very large *naunds*, or *gountahs*, made in the form of a rather flat turnep, of a black earth which bakes very hard. Casks are never used in India for water; all the ships

in the country trade have one or more tanks made of *teak* wood, rendered perfectly water tight, and containing from twenty to fifty butts. The water is thus carried in a small compass, and remains sweet much longer than when in casks. Even if no other reason could be assigned, it must be obvious, that, in a tank, the surface of wood necessary to contain fifty butts of water, will not exceed six hundred and fifty square feet; whereas, each of the fifty butts would present a surface of more than forty feet, whence the whole must amount to two thousand square feet.

Where a ship is navigated by lascars, many rules and ceremonies are adopted for the preservation of the water from impure contact. When native troops are on board, only particular persons are allowed to lay it in, or to serve it out, and even under such precaution, many of the more fastidious shew great aversion to using the tank water; often undergoing great sufferings, both from hunger and from thirst, rather than drink of it, or even taste of viands prepared therewith. But this prejudice has, of late years, subsided considerably, in consequence of the frequent occasions the British government have had to send native troops on distant expeditions by sea.

Casks would certainly prove obnoxious to servants, and others, proceeding through the

Soonderbunds, owing to a general opinion among them, that we convey spirits, meat, &c., in such vessels; which, having been once used for *such* a purpose, could never be viewed by them as receptacles for beverage, without disgust and execration.

The town of Calcutta is supplied with fire-wood by persons who resort to the woods, about twenty-five miles from Calcutta, where they cut the smaller kinds of *serress, jarrool, soondry, g'hob*, &c., into junks about four feet in length, which are rived into two or four pieces, according to their diameter, and carried to market, where such billets are usually retailed at from twelve to fourteen rupees per hundred maunds, delivered at the door. This is the only kind of fuel used in the kitchens of Europeans, and forms the supply of nine-tenths of the native population also: the remainder use the *gutties* made of dung.

It is to be lamented that Government have never adopted a plan I long ago offered, of employing the convicts in clearing away a sufficient tract around Diamond Harbour, which is now peculiarly unhealthy, and is the grave of full one-fourth of the crews of the India Company's, and other ships, that generally are moored there for months.

I am aware that objections have been stated in regard to clearing away the forests in the

Soonderbunds, on account of their being considered a natural defence in that quarter; but, without entering upon the policy, or otherwise, of such a retention of that 'wilderness of all wildernesses,' there does not appear to me any sound reason for suffering the principal naval station to be backed and flanked by woods and swamps, from which disease is poured forth amidst our unfortunate countrymen.

I have been assured, that, taking one year with another, full three hundred European sailors die of diseases incident to the laying up of ships for a while in the river, of whom, the larger portion are taken ill at, or below, Diamond Harbour.

Those who have occasion to pass through the Sunderbunds, which can be done by water only, ought to be extremely careful not to venture ashore, unless at some of the little towns, whose vicinity may afford some security against the attacks of tigers, by the jungle having been partially cleared away. The romantic scenery, every where inviting the eye, should not be permitted to allure the traveller from his state of safety; nor should the abundance of game, especially of deer, lead him among those coverts in which danger equally abounds.

Nor are the waters less devoid of mischief: sharks, of an uncommon size, are every where numerous and greedy; while their competitors,

the alligators, not only infest the streams, but often lie among the grass and low jungle, waiting for a prey, with which, so soon as seized, they plunge into the water.

Instances have been know, both of tigers swimming off to board boats, and of alligators striking the *dandies* (boatmen) out of the boats, with their tails, and snapping their victims up with a nimbleness fully proving the falsehood of that doctrine, which teaches to escape from the crocodile by running out of the right line, '*because the animal cannot turn to follow!*'

If those who either gave, or believed in, such advice, were to see with what facility an alligator can turn about, or with what agility he can pursue, *and catch*, the large fishes that abound in the great rivers of India, the folly would be so self evident, as to cause an immediate dereliction of so preposterous an opinion.

Besides, the *koomeer*, or bull-headed alligator, which, generally speaking, is the only kind to be seen in brackish waters, is peculiarly fierce and active; far more so than could be supposed, at first sight, of an amphibious animal of the *lacerta* tribe, (for it is nothing more than an immense lizard, or guana,) whose length has been thirty feet, and whose girth has equalled twelve feet.

Such is the ravenous disposition of the *koomeer*, that it will not hesitate to seize cattle that proceed to drink of the river water where

it is fresh; but this does not often happen; the places where cattle proceed to slake their thirst, being, for the most part, rather shallow, so that an alligator, sufficiently formidable for such an attack, could not lie concealed. It has fallen within my way to see some oxen that had been seized by the head, or by the fore leg, but which had either been rescued by their drovers, or had succeeded in escaping from their merciless enemy: they were all so lacerated as to be completely disfigured!

The size of a boat may make much difference regarding the time required to make the Soonder-bund-passage: generally from ten to twelve days will elapse in making the shortest cut in a *budj-row* of from twelve to sixteen oars; while a light *pulwar*, that can pass through the lesser creeks, and make way against the tides, which are extremely intricate, on account of the numerous channels that wind in every direction, may perhaps get through in seven or eight days. Much will depend on the route: if Dacca, or any part of the Megna, be the destination, full ten days will be requisite, but if the Comercolly track, which opens into the Ganges nearly opposite to Nattore, be followed, the great body of the wilderness will be avoided, and the fertile districts of Jessore, Mahomedpore, and Comercolly, will be passed through with facility and gratification.

It does not appear that any accurate survey has been taken of the Soonderbunds, further than to ascertain the several channels, and to lay down the bearings of particular shoals, which run for many miles off the coast, presenting, on the whole, a most intricate and dangerous approach to vessels even of small burthen; though, with proper care, ships of great size may be carried into the Rogmungul, the Hooringattah, and the Mutwallah rivers, where they may ride in perfect safety.

Mr. Benjamin Lacarn, many years back, explored the passage at the back of Saugur Island, and presented to the Government in India very accurate draughts of the soundings and bearings; from which he enabled the Board to judge of the practicability of resorting to that passage, with more safety and convenience than now exists, in respect to those channels that lie to the wesward of Saugur.

The spot selected for the reception of vessels was called New Harbour, and the stream leading to it from Culpee was designated Channel Creek. It is to be presumed, that, notwithstanding the plan has not been carried into effect, although occasionally resorted to, the merits of the suggestion must have been considerable, as the Company have thought it but just to remunerate that gentleman's abilities and research, by an annuity

of £600., which has been lately raised to £1000.

Several objections have been urged against the adoption of New Harbour, of which some may be cogent; but, from all I have ever heard on the subject, it appears to me, that the reasons given for rejection exist at least as formidably in the western channels, where some of the advantages offered by New Harbour are totally wanting.

The time will probably arrive, when Saugur Island, instead of being a desolate waste, inhabited by various wild animals, may present a rich expanse of agriculture, destined for the support of an industrious population, inhabiting those shores so favorably situated for extensive commerce, and so highly protected by nature against foreign incursion. The channels leading past it, on either side, are narrow, and certainly might be defended by a very small force against a powerful fleet.

Many opinions, and some bold assertions, have been offered regarding the Soonderbunds. Some consider the immense wilderness that borders the coast, to be of no great antiquity, and pretend, that probably one hundred years would be too much to allow for the duration of that soil, whereon such stupendous forests of noble trees are now to be seen.

That the whole of the country south of the

Ganges, from Bogwangolah to Saugur, and in the other direction to Luckypore, &c., was formerly covered by the ocean, may be readily believed, both from the nature of the soil in general, and from the various marine productions to be found occasionally, when wells are dug to any considerable depth.

The ancient city of GOUR, of which only an immense assemblage of ruins, covering full thirty square miles, are to be seen, stood not very far from Mauldah.

That able geographer, Major Rennell, states it to have been the capital of Bengal 730 years before Christ, and that it was deserted in consequence of a pestilence; that it formerly stood on the banks of the Ganges, from which it is now distant nearly five miles; the river having, as is very common in that quarter, changed its course: the Mahanuddy, which passes within two miles of it, is navigable throughout the year. Many parts of GOUR are now full twelve miles from the Ganges.

The following extract from Major Rennell's Memoirs, pages 55—6, may serve to illustrate the position I have to assume regarding the Soonderbunds: he says, 'Taking the extent of the ruins of GOUR at the most reasonable calculation, it is not less than fifteen miles in length, (extending along the old bank of the Ganges,) and from two to three in breadth.

Several villages stand on part of its site: the remainder is either covered with thick forests, the habitations of tigers, and other beasts of prey, or is become arable land, whose soil is chiefly composed of brick-dust.

'The principal ruins are a mosque, lined with black marble, elaborately wrought, and two gates of the citadel, which are strikingly grand and lofty. These fabrics, and some few others, appear to owe their duration to the nature of their materials, which are less marketable, and more difficult to separate, than those of the ordinary brick buildings; and are transported to Moorshadabad, Mauldah, and other places, for the purpose of building. These bricks are of the most solid texture of any I ever saw; and have preserved the sharpness of their edges, and the smoothness of their surfaces, through a series of ages.

'The situation of Gour was highly convenient for the capital of Bengal and Bahar, as united under one government; being nearly centrical with respect to the populous parts of those provinces, and near the junction of the principal rivers that compose that extraordinary inland navigation for which those provinces are formed; and, moreover, secured by the Ganges, and other rivers, on the only quarter from which Bengal has any cause for apprehension.'

Here I feel at a loss; for the author has

evidently been deficient in that perspicuity which characterizes his work; it does not appear to me what quarter is meant in this instance; the greater part of Bengal being divided from GOUR by that same river, the Ganges, which is here described as a protection to GOUR against incursions from Bahar. If this be not the Major's meaning, I can find no other; at all events, the passage is incongruous.

Setting, however, that matter at rest, as being irrelevant on this occasion, I shall proceed to observe, that throughout the Delta of the Ganges, which forms an area of full twenty thousand square miles, (it being nearly a right-angled triangle, whose sides average about two hundred miles,) we have not one vestige of remote date!

It has, no doubt, been asserted by some travellers, and I have heard several of the natives declare, that, in some parts of the Soonderbunds, ruins of great extent are to be seen. These are said to be the remains of cities which formerly flourished on the borders of the ocean, but were abandoned in consequence of the depredations of the *Burmans*, or *Muggs*, who inhabited the country lying south of Chittagong, and who have, within the last fifteen years, called to our memory that such a nation was still in existence.

Admitting the existence of such reputed

ruins, we have no right to place them to the account of the earlier ages; we have no records of their existence; the whole of the details that have hitherto been offered to the world, either by native traditionists, or European surveyors, give no account of any such fragments; while, on the other hand, every presumption is in favor of the whole Delta being comparatively modern.

Major Rennell, at page 347 of his Memoirs, observes in a *note*, that 'a glass of water taken out of the Ganges, when at its height, yields about one part in four of mud. No wonder then that the subsiding waters should quickly form a stratum of earth; or that the Delta should encroach upon the sea.' If we estimate the course of the Ganges, (setting apart the Barampooter,) at fifteen hundred miles, and take its mean width at half a mile; which is, indeed, reducing that magnificent flow of water to a mere stream, we have then a surface of seven hundred and fifty square miles, of which, one fourth is said to be mud, or matter light enough to be kept suspended by the violence of the current. This should give nearly two hundred square miles of soil.

The foregoing computation proves the Delta to contain twenty thousand square miles; therefore, if Major Rennell's hypothesis be correct, the whole of the Delta might have

been formed in one hundred years; taking the depth of the river, when at its highest, to be equal to the depth of the soil. But, if we recollect that probably many fathoms of sea were filled up by the encroachment that thus took place, we may be correct in allowing ten times that period, *i. e.* a thousand years, for the completion, or, rather, for the gradual accumulation, of so extensive an addition to the *terra firma* of Asia.

At page 348, Major Rennell argues very strongly, though unintentionally, perhaps, in support of my hypothesis, that GOUR formerly stood on the borders of the ocean, and was, probably the Tyre of Hindostan. He says, 'As a strong presumptive proof of *the wandering of the Ganges*, from the one side of the Delta to the other, I must observe, that there is no appearance of *virgin* earth, between the Tipperah Hills on the east, and the province of Burdwan on the west; nor on the north *till we arrive at Dacca and Bauleah.*'

Uniting all these points, and agreeing with Major Rennell that the Ganges discharges, on a medium, 180,000 cubic feet of water in a second, we may easily imagine that the present Delta has been formed by the sedimentary portion propelled forward in constant succession, until it gained the highest level to which the annual inundation could raise it; after which,

the black mould on the surface must have been produced by the constant accumulation of vegetable matter that rotted thereon.

It is a curious, but well known, fact, that from Sooty to that part of the Cossimbazar Island which lies nearest to the tide's way, the whole is obliged to be preserved from inundation by an embankment, called the *poolbundy*, maintained at a very great and regular expence; an obvious demonstration that the present course of the Hooghly has not been settled many centuries; for almost all rivers, long subject to such overflows as those we witness in Bengal, ultimately raise their banks, by an annual deposit of matter, to such a height as afterwards prevents their streams from passing over into the adjacent country.

There can be little doubt, that the city of Gour stood on a spot which, in very ancient times, was washed by the sea; and we may, without being accused of credulity in the extreme, admit the great probability of the Ganges having then debouched into the *sinus*, or bay, at that same spot.

Nor should we doubt, that those sands, which are, at this day, so dangerous to navigation, from Balasore to Chittagong, will, at some remote period, be encreased and raised, so as to become, in the first instance, islands; and, ultimately, parts of the continent: the present

channels serving for the courses of future rivers, which, in so loose a soil, may, like the Ganges in our times, be subject to changes of locality, whenever the floods may prove so impetuous as to open new beds, and cause the streams to be diverted into them.

The Sunderbunds, whatever may be their date or origin, present, at this day, a most inhospitable aspect, and give, exteriorly, a feature to the country which by no means corresponds with the interior: they are, in truth, a hideous belt of the most unpromising description, such as could not fail to cause any stranger who might be wrecked on that coast, and who should not proceed beyond the reach of the tide, to pronounce it '*a country fit for the residence of neither man nor beast.*'

When Major Rennell remarked, 'that they furnish an inexhaustible supply of wood for boat building;' he might have added, 'of timber for ship building.' Many very large vessels have been launched from this quarter, but, no pains having been taken to season the timber, it was not to be expected they should prove so durable as they might have been rendered by due precautions in that particular. Nor is the wood itself of the best quality for naval architecture; for, though it is very strong, and to be bent with facility to any necessary form, it, being extremely subject to be worm-eaten, proves a great draw-

back on its being brought into more general use, unless for such vessels as are intended to be coppered: for such, the *jarrool* may answer, as may also the *soondry;* both which abound in every part of the Sunderbunds.

The whole coast, from Balasore to Chittagong, has at times been occupied by a class of natives called *Molungies*, who manufacture salt from the sea-water. The produce of the several *chokies*, or manufactories, is immensely valuable, as has already been shewn, and suffices for the consumption of the whole population of all the Company's dominions, besides what is exported into those of the Nabob Vizier, &c. About thirty-five years ago, salt used to be sold at a rupee, or a rupee and a half, per factory maund of 72lb.; which might average about one half-penny per lb.; but, since the Company monopolized the manufacture, and imposed a heavy duty, the price of salt has gradually risen to about four rupees per maund.

The importation of salt, by sea, is prohibited, except under partial or temporary licences; but it is brought from the mines to the northward of Delhi in large quantities, though not of so good a quality, it being generally very bitter, especially the *Salumbah*, or more opaque rock-salt, which is far less serviceable for curing meat than the *Samber;* both these kinds are brought in

small prismatic masses, and, though in common use among the natives of the upper provinces, are never, except from necessity, allowed to appear at the tables of Europeans, though employed in their culinary preparations.

Salt is also obtained, but not of a prime quality, by piling up large quantities of the sand forming the beds of rivers, after the waters have subsided into very narrow channels. On these heaps water is poured in abundance, and, being afterwards drained into reservoirs, the salt either chrystalizes by solar heat, or by being boiled in large iron pans, similar to those used for chrystalizing sugar from the expressed juice of the cane.

In travelling by water, many points, totally unheeded by European tourists, are necessarily to be attended to previous to departure. I have already warned my readers, that no furnished house, no lodgings, no public vehicles, no inns, and, in short, no preparation for the lodgment or convenience of temporary sojourners, are to be expected in any part of India; with the exception of the taverns and punch-houses already described. Therefore, when an excursion is to be made by water, a *budjrow* must be hired, which may commonly be effected either by what is called '*teekah*,' or so much for the trip, according to the distance, with some allowance for demurrage; or the vessel may be hired at a certain monthly

sum; generally taken at ten rupees per oar. Sometimes return-*budjrows* are to be had at a cheaper rate: whichever way the bargain may be made, the person hiring has nothing to do with the pay, or provision, of the several men employed in navigating the vessel.

The following Table of Allowances granted by the Company to officers, and others, proceeding, according to orders, from one station to another, will be both useful to those who may be proceeding to the East, and serve to give a general idea of the periods required, in ordinary seasons, taking the year round, for a boat's reaching her destination, and returning to the place she quitted. The allowance likewise includes whatever may be intended for not only the *budjrow*, but for an attendant baggage-boat, and a cook-boat.

TABLE OF ALLOWANCE

FOR

BUDJROWS AND BOATS.

	Sonaut Rupees per Month.
To a Colonel	930
To a Lieutenant-Colonel, Physician, General, or Chief Surgeon	630
To a Major and Head Surgeon	360
To a Captain, Pay-Master, Deputy Pay-Master, and Regimental Surgeon	180
To a Subaltern, Hospital, or Regimental Mate .	100
To a Cadet	80
To a Conductor	50

Officers are entitled to the allowance for *budjrows* and boats only in the following instances: viz.

When posted to corps on their first joining the army.

When ordered to proceed, by water, upon any duty.

When removed, *without their own application*, to supply vacancies in the corps to which they are removed.

When water conveyance is not practicable, the difference of *batta* is to be drawn, calculating from the day of appointment, and allowing ten miles for daily progress.

Where no ascertained rate is given, officers are to draw at the rate of ten miles against, and fourteen with, the current, for each day's progress. The following may be considered the general standard; by which extraordinary cases are likewise governed.

		Months.
From Calcutta	to Berhampore is allowed for as	1
Ditto	to Monghyr	1½
Ditto	to Patna, or Dinapore	2
Ditto	to Buxar	2¼
Ditto	to Chunar or Benares	2½
Ditto	to Allahabad	3
Ditto	to Cawnpore	3½
Ditto	to Futty-Ghur	4
Ditto	to Dacca	1
Ditto	to Chittagong	2
Ditto	to Midnapore	½

It is proper to remark in this place, that a boat may, at most seasons of the year, proceed to Berhampore, (provided the river be open,) in about seven or eight days. The distance by water is nearly double that by land, owing to the winding course of the river, which formerly could competite with that passing under Lucknow; which, owing to the mazes of its course, received the name of '*Goomty*,' or winding.

Within the last twelve or fifteen years, many of the narrow isthmuses have been cut through, whereby the distance from Moorshadabad to Calcutta has been reduced full twenty miles; some yet require the aid of art, to perfect what the hand of time seems preparing for the still further abbreviating the passage by water: probably, in the course of twenty years, the river may be brought into a tolerable line; but, how long it will remain so, is another consideration; as the soil is every where, except about Rangamatty, (*i. e.* the red soil,) a few miles below Berhampore, so loose as to be totally unqualified to restrain the violent current which prevails in every part during four months in the year.

The passage to Chittagong can rarely be performed in a common *budjrow*, a great part of it being across the mouth of the Megna, indeed, in an open sea, subject, at least, to very heavy swells, if not to squalls, such as give much trou-

ble even to those who are on board substantial sloops, and other vessels coming under the description of *sea-boats*. However, during the cold months, an adventurous *manjy* will sometimes make the trip with his *budjrow*, provided a handsome gratuity be offered on such a hazardous occasion.

The best mode is to embark at Calcutta on board one of the Chittagong traders, of which some are commonly on the point of sailing, and to make a sea trip at once, in a secure, and tolerably pleasant manner. It is true, this mode does not offer all the conveniences of a good large *budjrow*; but that is balanced by the safety and celerity with which the voyage is made. A *budjrow* will rarely complete the trip to Chittagong under three weeks; whereas, a coasting sloop will commonly perform it in as many days, after quitting the pilot, either in the northerly or southerly monsoon; the coast being east, with a very little southing.

After a *budjrow* has been offered for hire, it will be but common prudence to send a carpenter on board to search her bottom, and to place a servant on board for a day and a night, to ascertain how much water she may take in during that time.—Some of the best, in appearance, are extremely rotten, and can only be kept afloat by constant baling, in consequence either of the depredations of worms, or of the number of

years they may have been built. Some are neat and clean, others are filthy in the extreme; some are supplied with good Venetians, lockers, curtains outside the windows, &c., &c.; while not a few, though not totally destitute of such conveniences, offer them in a most miserable state of wretchedness and of inutility. The roofs of nine in ten do not keep out water.

It will, on every occasion, be indispensably necessary to make memoranda of the terms on which the *budjrow*, &c., may be taken; and to obtain from the *manjy* a written agreement; the want of which may prove unpleasant, either in consequence of any misunderstanding, or from any attempt that may be made to impose upon such Europeans as may not be supposed to have sufficient knowledge of the ordinary routine of such affairs, to secure them from depredation.

The masts, sails, rigging, &c., of the vessel should be carefully over-hauled; and, in particular, great care should be taken that one or two good *ghoons*, or track ropes, of sufficient length, be on board; since a defect in this branch of equipment will inevitably produce great delay, and, in strong currents, subject the boat to imminent danger.

Let it be remembered, that, whatever the number of oars paid for may be, so many actual boatmen there ought to be, exclusive of the *manjy*,

or steersman, and the *goleah*, or bowman: it is a very common deception to count the latter in among the rowers, because he sometimes sits to an oar fitted out for him on the very prow of the vessel, when there is no occasion for his standing to throw the *luggy*, or bamboo-pole, whereby the boat is kept clear of banks, shoals, stumps, &c.

When an engagement is made of the *teekah*, or job-kind, the *manjy* will, for his own sake, endeavor to get away as speedily as possible, and will ordinarily make sure of a good crew, in order that his money may be the sooner earned; but, when paid by the month, there will be no end to excuses, delays, and evasions: the *dandies* will generally be wanting in number, and their quality be very indifferent.

The best mode, on such occasions, is to apply to the police, which, under proper circumstances of established criminality, will put a *peon* (or messenger) on board, at the expence of the delinquent, and make such a change in the posture of affairs as cannot fail to please the employer. This is a safe and efficacious mode of proceeding; whereas, when justice is taken into the hands of the person hiring the boat, and that abuse and blows are dealt out, under the hope of gaining the point, the grounds of complaint are laid, and the *dandies*, so far from doing their duty, will either abscond wholly, or secrete

themselves in such manner as effectually to impose an embargo.

I do not mean to say, that sometimes a recourse to the *manual* may not be advisable, or even peremptorily necessary; but such must be adopted with extreme caution, and with such a mixture of resolution and conciliation, as may produce the desired effect, without establishing a character for brutality, or unnecessary harshness. If, during the trip, occasion for complaint should arise, it is best to refer the matter to any persons in office, whether native or European, who may be within a suitable distance. The *manjies* have an insuperable antipathy to this mode of proceeding, because it deprives them of all grounds for justification, or representation; the want of which, in the hearing of an European magistrate, speedily induces to their corporal punishment; while, in the estimation of a *cutwal*, or chief of a village, it is sure to subject them to some pecuniary loss, whether by fine, by deduction from the sum to be paid as hire, or by having to maintain one or more *peons*, according to the nature of the offence.

Most *budjrows* have two apartments, exclusive of an open *veranda* in front; the latter is on a level with the dining apartment, but the chamber, which is more towards the stern, rises one or two steps above their level, in consequence of the form of the vessel's stern: beyond all

there is usually a small privy, which, being still more elevated, is ascended by other steps.

As the chamber contracts considerably towards the after-part of its floor, it will be necessary to ascertain whether a small cot (*i. e.* a bedstead) can stand in that part of the *budjrow*, without inconvenience; as also whether the height, between the floor and the roof, may admit of the bed-posts being erected. If the space should not allow them to be elevated, they must be unshipped, either by taking off their hinges, or by drawing them forth from their sockets, and the curtains must be suspended from hooks, nails, &c., driven for that purpose into the beams that support the roof.

Though floating on a large river, whose waters are celebrated for their virtues and purity by the whole population of Hindostan, it will, nevertheless, be indispensably necessary to take on board a good large *g'oulah*, or jar, which may be lashed to the mast, and be used as a depôt for such water as may be intended for culinary purposes, or for beverage. In a few hours it will have settled thoroughly, and should then be drawn off as required into smaller vessels, called *kedjeree-pots* by Europeans, but by the natives *gurrahs*.

Whence the former designation originated I never could learn, but conclude it resulted either from the supplies of crockery furnished

to our shipping at *Kedjeree*, or from the very common circumstance of that preparation of rice, split peas, &c., called *kitchurry*, which may often be seen boiling, wholesale, in vessels of this description, for the supply of a dozen, or more, of *dandies*, &c.

The forepart of every *budjrow* is decked, and furnished with two hatchways, with appropriate coverings: the whole of the part under the deck, which reaches from the *veranda* to the stern, is generally considered by the *manjy* as a privilege, of which he rarely fails to avail himself, when it is possible to render the trip a trading voyage. Against this too much precaution cannot be adopted; for not only will the *budjrow* be so heavily laden as to draw more water, (an object of considerable importance,) but to track with far greater difficulty, and to leak very abundantly.

If any contraband trade can be carried on with tolerable safety, it is usually in this manner; because, owing to the general deference paid by the custom-house officers, and *chokey-peons*, in every part of the country, to European gentlemen, and to their equipages, few, or none, will attempt to search a *budjrow* under hire: the facility with which goods can be landed, is such as to obviate, almost totally, any danger to be apprehended in the performance of that part of the adventure.

Government has, it is true, placed a number of checks on this kind of fraud; but, unhappily, it is out of its power to go so far into the remedy as would put a total stop to illicit commerce, without subjecting their own servants, of whatever rank, to the intrusive, and ultimately insolent, researches of those natives by whom they should, on every occasion, be treated with the utmost respect and consideration. It is inconceivable with what secresy, and caution, the *manjies* act on such occasions. An instance is within my knowledge, of a gentleman hiring a *budjrow* at Patna, to proceed to the Presidency, but it was in vain that he importuned the *manjy*, day after day, and hour after hour, to complete his crew, and to have all in readiness for embarkation: at length, all was adjusted, and the vessel proceeded in high style.

The gentleman was unaccountably drowsy, and often wondered at the rapidity with which he seemed to be making his passage, but was not displeased to find himself so speedily floated towards the place of destination: it was in vain that he endeavored to prevent the *manjy* from stopping at Chandernagore, a French settlement, about twenty-two miles from Calcutta; when, to his great surprize, he saw several boxes of opium, which had been concealed in various parts of the *budjrow*, and particularly under the floors, handed out to some *sircars* who

were at the *g'haut*, or landing-place, anxiously awaiting her arrival.

However unpleasant the above-mentioned cargo might have proved, it cannot be compared with the truly offensive practice common among all the boat-men of Hindostan, of cutting such fish as they may purchase, catch, or steal, into slices, and hanging them over the quarters to become sun-dried. This custom should never be tolerated on any account; not only because the effluvia are cruelly distressing, but, that, wherever it is allowed to obtain, all the rats are sure to be attracted from whatever boats, or banks, may come in contact with the *budjrow:* once in, Old Nick cannot get them out; except by emptying the vessel completely, and fumigating her with sulphur; or by sinking her for a while, so as to drown the vermin, of all descriptions, that harbour in the numberless recesses, chinks, &c., to be found in every quarter of an old *budjrow.*

When a single gentleman is intent on proceeding on the most economical and expeditious plan, he will find it best not to have even a cook-boat in his suite; but should confine himself entirely to whatever convenience his *budjrow* may afford. If this plan is acted upon, the several boxes, &c., may be arranged within the cabins, or, at the utmost, under the deck; taking care, however, to debar the *dandies* from

visiting that part of the vessel, by placing stout battens, or bamboo-laths, across, by way of confining them to the fore hatchway, down which they ordinarily keep their cloaths, fire-wood, &c., &c., and, occasionally, make a *choolah*, or hearth and fire-place, of mud, whereon to cook the victuals of the crew; an operation performed by one of the *dandies*, who, on that account, is exempted from all ordinary duties, and who is generally capable of serving up an admirably well-savored curry.

The after-part of the hold is commonly spacious enough to hold a tent of ordinary dimensions; but it may become a question how far it would be prudent to put camp equipage in the way of the rats, which would, probably, for the sake of shelter in the vicinity of the culinary operations, soon burrow into the hearts of the packages, and do inconceivable damage. If, however, no other place can be allotted for the reception of a tent, and the weather be such as not to warrant its being stowed upon the poop, no alternative is left, and the risk of destruction, or, at least, of very serious injury, must be met with resignation.

Though not indispensably necessary, a tent of some kind will be found extremely convenient, when proceeding by water to any distant station, especially during the hot season. As the boat-men usually come to about sun-set, or,

perhaps, a little earlier, if any favorable situation, or the proximity of some large town, should invite, a small tent may easily be taken ashore, and pitched on the elevated bank, where the freshness of the air, and the wide range of prospect, prove a most comfortable relief to a person who, during the day, may have been obliged to remain under the heated roof of a cabin, whereof the windows were closed to keep out the sun, hot winds, and flying sand.

Many gentlemen have one small boat employed chiefly in going forward with such a convenience, and which, after the bed, &c. may be shipped at day-break on board the *budjrow*, that no delay may arise in departing, waits to receive the baggage left on the spot, with which it proceeds at such a rate as soon makes up for the detention: a boat of this kind is extremely useful in many instances, but especially in procuring supplies from an opposite bank, for going to or from shore in shoal water, for towing a *budjrow* in strong waters, for carrying out an anchor, or rope, to warp by, &c., &c.

Where only a *budjrow* and such a small boat are employed, the latter generally has a *choolah*, or hearth, &c., prepared within it under a small thatch. She commonly has to carry the proper supply of dry fire-wood; that obtained on the way being, with few exceptions, green, and causing the viands to acquire a very smoky, un-

pleasant flavor. The poultry are also usually conveyed on the thatch of the cook-boat, in small *tappahs*, or cages, made of split bamboos: this part of the stock may consist of a dozen of fowls, with a few ducks, and a goose or two; and, occasionally, is accompanied by one or two milch goats, which, being supplied with foliage cut for that purpose, during the day, and being sent to some verdant spot when the boat comes to in the evening, rarely fail to furnish milk enough, of a very superior quality, for the morning and evening tea.

The traveller must not expect to be supplied with beef, mutton, or veal, as he may proceed, in any part of the country, except at military or civil stations: there he may, perhaps, be enabled to purchase a sufficient supply of meat to make some variety in his diet as he passes from one station to another; but, unless in some very particular situations, he must content himself with poultry of various kinds, but chiefly chickens, and with kids, of which the meat is excellent. He may, at some of the principal towns where Mussulmans reside, here and there fall in with a butcher, who can furnish a joint of *kussy* (*i. e.* cut-goat); or he may perchance pick up a tolerable sheep, which may, at all events, serve for gravy, and supply his pointers and spaniels with two or three days' substantial provision.

The mention of cutting up a sheep for such

purposes, may appear extraordinary to the European reader, but it must be recollected, that such sheep are rarely worth more than two shillings, that in some parts the country swarms with them, and that their wool is not valuable, owing to its being lank, coarse, harsh, and not of a strong fibre: it is, indeed, more like that hair which grows upon many horses that are turned out during the winter, and comes off by handfuls as the spring advances.

The boats employed for carrying baggage are of two kinds; *woolachs* and *patellies*: the former are built in the lower provinces, with round bottoms, and often draw much water; the latter are chiefly of up-country build, have flat bottoms, and are clinkered; this construction suits them admirably to the shallows, which, after the rainy season, abound in all the rivers beyond the tide's way, and especially at a distance from the sea.

Some of the *woolachs* used by the more opulent native merchants are capable of bearing from fifteen hundred to three thousand maunds, (*i. e.* from eighty to a hundred and twenty tons,) but their medium may be taken at from four to eight hundred maunds, which is also the general measurement of *patellies* in the common employ of grain-merchants, &c.: many are to be seen of full two thousand maunds, but such are calculated for the great rivers only; not but that in

the channels abundant depth of water may be found, so deep, indeed, that several ships, of five hundred tons burthen, have been built at Patna, which is, by water, six hundred miles from the sea; but those channels are so crooked, and the currents so strong, as to render it very difficult for the ordinary number of *dandies*, proportioned to the tonnage, to navigate such unwieldy boats with safety and expertness.

The best size for a baggage-boat to attend upon a *budjrow*, especially in proceeding against the stream, may be from three hundred to five hundred maunds: observing, that the *patelly* is by far better calculated for shallow water, and for the conveyance of horses, than a *woolach*; but, being so low in the water, the former is rather subject to be swamped in rough water, and, owing to its construction, is very apt to become hog-backed, and, ultimately, to give way in the middle; an accident which seldom or never happens to the latter.

When horses are to be carried in boats, as is very commonly done, it becomes necessary to make a platform, at about a foot from the bottom of the boat, consisting of brush-wood, mats, and soil: the thwarts being rarely a yard asunder, one must be taken out to make a stall of sufficient width; therefore, if three or four horses are put on board the same boat, a corresponding number of thwarts must be withdrawn.

When the animals are about to be embarked, the thatch opposite the stall must be raised high enough to allow a horse to leap in without danger, from the bank.

This operation is often attended with considerable difficulty; for some horses are extremely averse to enter upon the solid platform of a large substantial ferry-boat, such as that at Ghyretty, even when placed on a level therewith, by means of a fixed, or moveable pier. When, therefore, it is considered how many obstacles seem to oppose the admission of a horse into a covered boat, when, probably, he is standing above his knees in water, and has to rise, under every disadvantage, over the boat's gunwhale, it will not appear surprizing that many hold out for hours, notwithstandig every effort on the part of the *syces*, (or grooms,) and that a large portion are severely lamed in the attempt.

It is curious to observe how very quiet and temperate horses become after embarkation! In such a situation, they seem to forget that wonderful propensity they invariably display when on shore, to attack each other, even when at a considerable distance; but, though parted by only a few feet, they become so tractable while in a boat, that their natures seem to undergo a complete change.

Notwithstanding this periodical, or, rather, local, timidity, at will be proper to secure that

part of the boat's side against which a horse may be able to kick; many instances having occurred of fiery steeds driving their hooves through the planks, which are not always very sound, and, even if undecayed, are generally by far too thin to resist so severe an operation: more than one *patelly* has foundered outright, with all the contents, in consequence of such an accident; the best mode of preventing which, is, by fastening a quantity of *jow* (an aquatic species of fern,) to the inside, as a lining, whereby the planks may be secured from injury.

When a vessel is tracked against the stream, it is usual for the *dandies*, or boatmen, to go ashore, each furnished with a club of bamboo, about two feet in length, to which a piece of strong cord is fastened at one end; at the same time, the *ghoon*, or track-rope, is veered out from a pulley in the mast head, or from a block lashed thereto, to as great a length as the situation may demand; commonly, from about seventy to a hundred and fifty yards may suffice, though, in very shoal water, mixed with deeps, or, where the ground is foul, even a greater length may be requisite.

The *ghoon* is about two inches round, and is made of white rope well laid: if made of tarred rope, it would prove too heavy, and oppose great resistance, by its want of elasticity, to the

exertions of the *dandies*, each of whom, fixing the end of his cord to it, and resting the bamboo club over his shoulder, so that it may act, in some measure, as a lever, proceeds at an easy pace, his body leaning well forward, each following at about four feet behind the other. The foremost at the track-rope has a great advantage over his followers; he not being subject to the numerous checks and vibrations occasioned by the frequent impediments, whether bushes, banks, masts of other vessels, &c., which operate very forcibly on those whose cords are attached to that part of the rope in his rear.

The number of *dandies* at a track-rope may be too many, as well as too few; except when a boat can keep close to the shore, and the *ghoon* makes but a very small angle from the line of her progress: then, all the power that can be given certainly proves efficient; but, when the angle between the boat's direction and the rope becomes considerable, it is evident the whole labor falls on a very few of the leading *dandies*; in fact, all but those few are then compelled to liberate their cords from the *ghoon*, otherwise they must be inevitably dragged out into the stream, unless those cords were many fathoms, instead of only four or five feet, in length.

The greater part of the trading boats use a different apparatus for tracking; in them, each

dandy is supplied with a fine cord, about as thick as a swan's quill, made of a fine kind of long grass called *moonje*, which, when wetted, and twisted into this kind of tackle, becomes firm and elastic; though it will not answer for cordage in general. Each *dandy* has about seventy yards of line, the inner end of which fastens to a stout rope, reeved, the same as the *ghoon*, at the mast-head, and long enough to be let out amply where requisite.

The other end of the line is coiled up by each *dandy* respectively, who fastens his bamboo club by its cord, at such part of the *moonje* line as may be let out; generally a small quantity of coil being reserved, which hangs down either over each *dandy's* breast or shoulder. By this means, each man tracks separately, and cannot be idle without the *manjy* instantly detecting him; the several lines form so many rays from the mast-head, and are capable, when equally strained, to bear an immense burthen.

Nothing can be more unpleasant than having to pass a *ghaut* where numbers of boats are lying: on such an occasion, a man is sent up to the mast-head of each, in succession, for the purpose of passing the *ghoon*; which, when liberated from one, swings on to another, causing a severe shock to the hinder *dandy* of the tracking party. Some use a very simple device for passing the *ghoon* over their mast-heads: this

consists merely of a kind of fork, made by tying the end of the *ghoon*, of each vessel respectively, then at rest, to a long bamboo, about a quarter of the length down. The *ghoon* being pulled, the bamboo is raised, and carries with it that of the boat in motion: a man then slips the latter over the mast-head with great facility.

It is not always that the people on board boats, laying at *ghauts*, will turn out to pass the *ghoon*; on which occasions, words are rarely of much avail. I always found that a *pellet-bow*, which sends clay-balls to about a hundred yards distance with considerable force, produced an instantaneous effect; the first shot rattling against the matted sides of a vessel's interior, rarely failing to cause wondrous activity on the part of her crew; though, now and then, it has been necessary to repeat the operation, before the desired effect could be produced.

I strongly recommend to all gentlemen travelling by water, that they insist on the *manjies* of their several boats carrying a small flag, of some obvious distinction, at their mast-heads: this prevents them from lying to, and concealing their vessels amidst a forest of masts, as they are very apt to do, when intent upon a clandestine trading voyage. Besides, as in the course of a day's tracking, and especially when sailing, it is very common for a *budjrow* to get

many miles a-head, such a device then becomes a guide as to the propriety of coming to for the night, or, intermediately, for dinner, &c.

The number of miles which can be run over in the course of a day in a *budjrow*, will necessarily vary according to circumstances, guided by the quantity of water in the river, the direction and force of the wind, and the competency of the crew. I cannot do better, in this place, than offer the words of Major Rennell. At page 360 of his Memoirs, he says, 'From the beginning of November, to the middle, or latter end of May, the usual rate of going *with* the stream, is forty miles in a day of twelve hours; and, during the rest of the year, from fifty to seventy miles. The current is strongest while the waters of the inundation are draining off; which happens, in part, in August and September.'

In a former part, I remarked that the rivers generally rise a few inches in May; which is to be attributed to the melting of the snow on those hills where the Ganges and Barampooter have their source. Both those rivers, which have their rise at the base, but on opposite sides, of the same mountain, and, after separating to full twelve hundred miles asunder, unite, and form that immense volume of water called the Megna, receive a supply from the same quarter, and at the same time: we cannot, however,

expect the force of their currents to be encreased much before the rains are fairly set in, which may be, generally, about the 10th of June, when their waters do, indeed, roll impetuously; so much, that many a boat has proceeded from Patna to Monghyr, a distance of one hundred measured miles by land, and full one hundred and twenty by water, between day-break and sun-set.

Major Rennell adds, 'Seventeen to twenty miles a day, according to the ground, and the number of impediments, is the greatest distance that a large *budjrow* can be towed against the stream, during the fair season; and, to accomplish this, the boat must be drawn through the water, at the rate of four miles and a half per hour, for twelve hours. When the waters are high, a greater progress will be made, notwithstanding the encreased velocity of the current; because, the filling of the river-bed gives many opportunities of cutting off angles and turnings; and, sometimes, even large windings, by going through creeks. As the wind, at this season, blows upwards,' (*i. e.* against the current,) 'in most of the rivers, opportunities of using the sail frequently occur.'

It must not be supposed, from the foregoing, that the boat actually makes a progress of four miles and a half within the hour: far from it, the *dandies* rarely walk more than two miles in

that time, but the velocity of the current being taken into account, would shew, that, if a log were to be heaved, the difference between the log and the boat's advance would give the result alluded to by the Major, whose general correctness cannot be too much admired.

In using the sail, infinite changes take place; sometimes it is full, then again close-hauled, and, perhaps, ultimately, lowered on a sudden, according as the course of the river may change; and this some twenty or thirty times within the day. But when the reaches lie tolerably fair, that opportunity offers, as sometimes happens for a whole day together, and that the wind is brisk in favor, a *budjrow* will run off from four to six miles within the hour. The river is often so low as to render the navigation very tedious, even under all the above favorable circumstances, by forcing the *manjy* to abide by the strong deep waters, and to wind in among the sands, which cause the channel to change its direction very frequently.

During the rains, and especially in the cold months, travelling by water is extremely pleasant with the stream; but, whatever facilities may be afforded, in any shape, I cannot say that any trip upwards, at whatever season, afforded me the smallest gratification. What with tracking, getting aground, remaining long among eddies, in which human carcases were

floating in all the various stages of putrefaction, the dust flying, &c., &c., nothing but *ennui*, or impatience, can reasonably be expected.

Here and there a walk may be taken; but he who ventures ashore must be watchful to embark before the *budjrow* may be obliged to put far out for the purpose of passing some endless shallow; otherwise, he may have to walk under a vertical sun, through bushes, or over ploughed, or muddy, lands, and among ravines, for many an hour, before the opportunity many offer for getting on board: to crown the whole, he may, perhaps, come to some *nullah*, or small stream, over which no conveyance is to be had, either by bridge or boat!

My zeal for bringing home a few birds, or a hare, has often decoyed me into scrapes of this kind, and caused me to utter many an imprecation against the river, for winding, the *manjy*, for going on, and my own folly, for subjecting myself to such unpleasant circumstances. I must freely confess, that, in this respect, 'experience did *not* give wisdom;' for, after full a thousand and one such disappointments, I felt, at the last, just as eager as ever, to silence such *chuckores* (a species of grouse) as had the insolence to crow within my hearing!

The navigation of the large rivers is rather more hazardous than among those of less breadth. When it is considered, that the

Ganges runs for upwards of a thousand miles through a country nearly level, and whose undulations are scarcely perceptible, except in a few places where the hills come down to the water's edge, as at Sickregully, Pointee, Colgong, Chunar, &c., it must appear obvious that but little shelter can be expected from these squalls, called 'north-westers,' which, from the end of February until the setting in of the rains, occur almost daily, and blow with considerable violence. Even when under a high bank, it will require much care, and good tackle, to prevent a *budjrow* from being blown out into the middle, where, if she is top-heavy, as is too often the case, and the proper means be not taken to keep her head to the wind, she will stand a chance of being overset.

Fortunately, the approach of a squall is always strongly indicated by the black appearance above the horizon, and by the distant lightnings: when such are sufficiently characterized to leave little doubt of the storm's passing that way, shelter should be sought in some creek, or under some high bank, of firm appearance, where the *budjrow* should be well secured by hawsers, carried out, and made fast to, substantial stakes driven into the ground by means of large malls, with all which every boat should be amply provided. *Luggies,* (or bamboo-poles,) ought to be carried out on the lee-side, for the purpose

of resisting the wind, and causing the upper parts of the vessel to bear up duly against the severe gusts which commonly usher in the gale.

If the vessel is on a lee-shore, the *luggies* must, of course, be between her and the bank, to prevent her from bumping against it, and the anchor should be carried out to windward, into deep water, to keep her from being forced ashore: a danger particularly to be apprehended on long shelving sands; where many a well-conditioned boat has had her bottom beat out, by the force with which the surges, coming across an expanse of perhaps a mile, or more, have dashed her against the hard sand.

Such situations are peculiarly hazardous, and ought to be avoided most carefully: the misfortune is, that, from eargerness to get forward, and from the hope that a north-wester may be either moderate, or pass another way, folks, in general, keep pushing on, and allow many a secure asylum to be passed very imprudently! Those who have experienced the effects of a violent squall about Sheerness, may be proper judges of what is to be expected from a most furious gale, which often continues for an hour, or more, in a river which may be said generally to flow between banks full two miles asunder, and which are, in most parts, from three to five, in some, full seven, miles apart!

About Bengal, especially in the Sunderbund-

passages, *decoits*, or water-robbers, are sometimes numerous. These often assemble in fleets, composed of long narrow boats, rowing from twelve to thirty oars, or paddles, at pleasure, and carrying from thirty to sixty, or seventy, men. Sometimes their fleets have been so formidable, and have so effectually put a stop to all commerce, as to call the attention of government, and to demand the presence of a strong establishment, backed by liberal offers of rewards, before the rivers could be resorted to in safety. Between Dacca and Backergunge, among the islands formed by the several minor branches of the Ganges, and by the innumerable creeks, with which the banditti are perfectly familiar, it has often been impossible for any boat to make its way, even for a few miles, without being boarded by these *decoits*.

As to rewards, little good is to be expected from them; the system adopted by the marauders is such as to render abortive any lures of that description. Where all participate, all will be found faithful to the cause, whether virtue or vice be the leader; and, where localities are such as to afford perfect security from the common run of pursuers, and where numbers render the association too formidable to admit any hope of success on the part of small detachments; in such instances, rewards can rarely produce the smallest benefit.

Wherever a boat, or even a fleet, may come to for the night, it will be indispensably necessary to keep a sharp look-out against thieves, who, appertaining to the several villages in the neighbourhood, rarely fail to assemble, during the night, under some bold chief, and to make an attempt to plunder by main force. It is scarcely to be credited to what a height this daring species of robbery has been, at times, carried. Were no other occasion existing, this would amount to ample cause for obtaining, if possible, a guard of sepoys, for the purpose of protecting the boats; but, strange to say, it is sometimes necessary to compel the villagers to sell their poultry, &c., to passengers, both by land and by water, although not simply a liberal, but an exorbitant remuneration is offered.

This does not proceed from unwillingness to make money, nor to sell the article in question, but merely from a spirit of opposition which pervades a large portion of the native population, who are often too adverse to contribute to the comfort, or, more properly, to the existence, of Europeans. It must seem curious that our countrymen are allowed to reside among a people of such a disposition, so far out-numbering, and possessed of such easy means of extirpating, us, with very little previous arrangement.

In saying this, I do not mean to accuse the natives of India of being so debased, so immoral,

or so vindictive, as they have been represented by many gentlemen, especially some divines who have lately returned from the East, and whose opinions breathe by no means the spirit of that sublime religion they would coerce the natives to adopt. Taking all points into consideration, and viewing the nature of the country conjointly with the nature of their laws, and of their former government, I think we have by far more to admire than to censure, in a race of people, who, notwithstanding some highly remarkable instances of depravity, may be classed among the most innocent, and most industrious, of worldly inhabitants ! ! !

This is saying much, but not *too* much, of a nation whose government absolutely tolerates thieving as a regular profession, and which has been known to make a very free use of the talents of its subjects for the purposes of obtaining plunder, or of gratifying its pique and resentment. I much fear, that, if such were the case with us, and that, if, instead of being ruled by a virtuous king, we were placed under a buccaneering monarch, we should by no means find so many pleas of extenuation as the natives of Hindostan can justly boast !

The truth of this position, in itself so reasonable, is made more fully evident by the obvious difference subsisting between the Company's and the Vizier's dominions. In the former, the

depredations committed are always nocturnal, and of that description to be expected under the foregoing circumstances; in the latter, the speculation is infinitely more open, more systematic, and more extensive.

That considerable amelioration must have taken place under our government, is to be proved, from the safety with which travellers may proceed by land throughout the country, when compared with the extreme danger attendant upon a journey through any part of the Vizier's territory; wherein almost every well presents the horrid spectacle of the mangled bodies of those who become victims to the sanguinary hordes of robbers that infest every part of that prince's dominions.

On this account, every gentleman proceeding by land, from one to another station, should make a point of obtaining a small guard of a naik and four, or even of two, sepoys, whose presence will generally prove a considerable check on the adventurous disposition of the villagers in that quarter. This precaution will not, however, alone be sufficient; application should be made to the *jemmadar*, or head-borough, of each village where the party may encamp, for a certain number of *chokey-dars*, (watchmen,) proportioned to the number of tents, horses, &c., and the whole of the property of every description should be nominally put under the charge of the men

thus furnished, observing, that the regular pay, which may be from four to six pice, or halfpence, for each, should be punctually paid to the *jemmadar* when the camp breaks up the next morning, and that every item is found to be in a state of safety.

When *coolies* (*i. e.* porters) are wanted, to carry the beds, tables, &c, of a party, application should be made, in like manner, to the *jemmadar*; and when, after arrival at the next stage, they may be discharged, it will be proper to be attentive to the regular payment of every individual thus furnished; otherwise, the servants to whom it may be entrusted to discharge them, will generally withhold a large portion, or even the whole, of what may have been ordered.

By thus regularly attending to matters of this description, the villagers will come forward with more alacrity; though, it must be confessed, they are generally very unwilling to engage as *coolies*; which is not to be wondered at, since the *jemmadars* generally extort from them at least half their earnings on such occasions: the evil being incurable, as matters now stand, must be borne as gracefully as our feelings may allow; and we must remain content with the reflection of doing justice ourselves, though we know for certain that our liberality, in the end, flows into a wrong channel.

When practicable, it is highly expedient to

obtain from the European collector's office, or even from any of the natives under his immediate authority, who may be deputed to, or resident at, such places as lie near the *road*, a *rhah-waunah*, or pass-port, wherein it should be set forth, that, whatever necessaries, or *coolies*, or *chokey-dars*, or *dowraws*, (guides,) may be requisite, should be furnished by such *jemmadars* of villages as should be called upon for supplies of the above description. This always ensures respect and attention, and causes the whole of the persons, to whom it is addressed, to be vigilant in the discharge of their duties, lest complaints should be preferred to the collector, who would speedily summon them to his court, and punish them in a suitable manner.

However audacious the thieves, whether house-breakers, or collectors on the highways, may be, they very rarely make an immediate attack on Europeans. This, no doubt, proceeds from the sense they entertain of the importance we attach to the safety of our countrymen, the murderer of whom would be assuredly detected, and suffer the full sentence of the law. Besides, all the people of Hindostan know, that, with the exception of watches, which, for want of pawn-brokers, and accomplices skilled in the melting of metals, are of no use to the predatory tribe, Europeans never carry about with them any thing valuable. No gentleman

ever has money about him; though his servants sometimes have, in their waists, a few rupees, intended for such disbursements as cannot be delayed without inconvenience.

Hence, the boxes, &c., of gentlemen, are generally aimed at, because the cash and valuables are contained in them; for the same reason, the most confidential servants are most commonly selected as objects of attack. Your true Hindostanee robber is, in general, very active, robust, and capable of great deception: he will patrole about a tent, during a dark night, in the manner of a dog, or of a jackal; the howl of which he can, perhaps, imitate so well as to deceive the sentries, and throw them completely off their guard.

If allowed to approach a tent, he will select that side where several servants are asleep under the fly, or awning, and gradually insinuate himself into the interior, either by passing under the walls, or between the overlaps; if such cannot be easily effected, he draws his *choory*, (knife,) which is sharpened for the occasion, and makes a slit in the cloth, or canvas, large enough to pass his body through, when, in the most cautious manner, and retaining his breath as much as possible, he gropes about for those articles which, during the day-time, he had seen deposited in some particular part of the tent, and, after making an opening large enough for

his purpose, or by opening one of the doors, he watches the opportunity for escaping with his booty.

The attempt to seize a thief under such circumstances, is extremely hazardous, and ought to be strongly reprehended. Being perfectly naked, and having the body highly lubricated with oil, it is impossible to grasp him in any part; while, on the other hand, he must be expected to use his knife very freely, under the determination of escaping.

I recollect a curious circumstance that happened in 1785, at Bankypore, when the tent of a staff-officer was entered, during the night, by a fellow of this description, who, it being moon-light, and one part of the tent only closed by a *cheek*, was discovered by the gentleman as he lay in bed. Seeing his property on the move, he sprang up to disengage a hog-spear that was tied up to that pole of the *marquee* which was nearest the bed; but the thief got the start of him, by seizing the officer's sword, which was suspended by a hook that buckled on to the other pole. The adventurer being thus armed, prevented the gentleman from getting possession of the spear: after one or two menacing flourishes, he darted out of the tent, sword in hand, and was speedily beyond the reach of pursuit.

Another very ludicrous circumstance oc-

curred some years antecedent to the above. A gentleman who inhabited a small *bungalow*, on the banks of a river, and who was very ill of that complaint 'the liver,' for which he was under a course of mercury, perceived, in the dusk of the evening, a thief prowling about the apartment in which he was sitting. The fellow was extremely industrious; and threw a number of articles, not even sparing the bed-linen, out at a window that stood open. The gentleman affected to take no notice, but resolved, when the thief should follow his booty, to take him by surprize, while in the act of collecting them from under the window.

This was, by no means, an imprudent resolution, as it appeared probable that the rogue might be secured, at the same time that the property should be recovered. At length, after having thrown out whatever was convenient to his purpose, and having peeped out of the window, the thief made suddenly towards the gentleman, and snatched from his head a beautiful shawl, with which he skipped out of the window.

This feat demanded instant action; the gentleman called lustily for his servants, who, awaking from their slumbers, ran to obey the vociferated summons, and were just in time to see a small *dingy* (or boat) pulling away to the

opposite bank, with the goods, the thief, and his accomplices, on board!

All who travel by land, should be on their guard never to allow jugglers, or show-men, of whatever description, to enter their tents; which they will endeavor to do, under pretence of shewing off their mummeries, with the intention of ascertaing the posture of whatever moveables may be within. In this, they are sometimes mistaken; it being usual to have all boxes, camp-baskets, &c., assembled about the foot of the tent-pole, at night, and to secure them by means of a chain passing through their respective handles, &c.; the ends of the chain being furnished with a padlock.

In fair weather, the safest mode is to have all the things moved out of the tent, and placed in a heap, under charge of a sentry, who then need pay little attention to any other object, as the thieves are most intent on those trunks, &c., which they suppose to contain money, plate, &c.; as to articles of apparel, they are of little value, and would, probably, lead to discovery; the handles of swords, and breast-plates, of officers, being generally of solid silver, may be placed among the furtive desiderata, therefore, should be placed in a state of security.

When I speak of discovery, it is not to be understood that the same dread is entertained on that head, as prevails among the thieves of

this quarter of the world. In India, whole villages are inhabited by thieves, who keep the country around in a state of perpetual terror and of vigilance: hence, when a *jemmadar* furnishes *chokey-dars*, he often does it with great reluctance, under the apprehension of a visit from some neighbouring gang of notoriety, who act with greater confidence, from the consideration, that the village, at which the robbery may take place, will be accountable for whatever property may be stolen.

Hence, a party is always safest when encamped near a village of professed thieves, who will, ordinarily, forbear to depredate under that circumstance; conscious that the value put upon the several articles stolen, must necessarily be, at least, tenfold their value to the robbers; though not in the least exaggerated by those from whom they were stolen.

Here it is to be observed, that, in order to render the claim to remuneration clear and decisive, it is proper that a requisition should have been made to the *jemmadar* for *chokey-dars*; otherwise, it may be argued, that the property was not under his protection. Sometimes, by way of cavil, a *jemmadar*, of such a description, will find fault with the position of an encampment, and use many pleas for the purpose of raising objections, whenever the losses sustained may be laid before the collector, or judge

of the district. If, however, he should refuse to grant *chokey-dars*, it will be necessary to keep a very sharp look-out; it being a strong indication of intended mischief.

Almost every *jemmadar* of character will reprobate the indulgence of that kind of curiosity which leads gentlemen, on their first arrival, to pay the smallest attention to the performances of mountebanks, jugglers, puppet-show-men, &c.; all of whom are notorious thieves, and are attended by numerous confederates, whose business it is to patrole about under the semblance of country-bumkins, come to view the camp, and to take advantage of whatever opportunities may arise, in consequence of servants, &c., quitting their several charges, to witness the exhibitions of the attractive portion of the gang.

My memory supplies various instances of the success of this stratagem; a circumstance not to be wondered at, when we consider the almost incredible perfection to which *leger-de-main*, the *tour de passe-passe*, and gymnastic exhibitions, are brought in India. I shall offer a few of the feats displayed by these people, observing, that, with regard to drawing yards of thread from the noses and ears of spectators; cutting their turbans into pieces, and joining them again; changing eggs to chickens, and mango-stones into growing bushes, bearing the ripe fruit,

making pigeons lay eggs, &c.; all such are considered as mere common-place deceptions, confined to the lower orders of this class of vagabonds.

The passing a sword-blade, of about two feet in length, and two inches in breadth, down the gullet, so as to be distinctly felt by the application of a hand to the operator's stomach, is certainly the most extraordinary part of the exhibition. In this, there is no deception whatever; the sword is entire, and firmly fixed to the handle; while its solidity is such as to remove all doubt regarding pliancy or evasion in any mode: all we can say of it is, that the practice is adopted at an early age; and that the implement used is gradually encreased, from a small rattan to that above described.

As to vaulting, the number of somersets, and capers, made, with seeming facility, while bounding over the backs of elephants, or of camels, placed side-by-side, are truly astonishing! Throwing spears at each other, and catching them under the arms, while in the act of mission, mutually, cannot but cause both dread and surprize: the accuracy with which this is constantly done, seems to preclude all admiration at the skill of the celebrated William Tell.

Jumping through a frame that supports several, perhaps a dozen, of *tulwars*, (cutlasses,) of which the edges are remarkably sharp, and

which appear to preclude the passage of a man's body through the little interval left among their points, must be viewed with admiration; as must also the running bare-foot along a piece of cloth, perhaps ten yards in length, that is supported, at about a foot from the ground, by several men, each of whom holds, under the cloth, a sharp *tulwar*, of which the edge is turned upwards: the astonishing agility with which this is performed, absolutely requires to be seen ere it can be duly appreciated!

Some curious performances in balancing are worthy of notice: of these, the stringing, and unstringing, of eggs, is, perhaps, the most extraordinary. A man balances, on his head, a kind of platter, projecting, perhaps, six inches every way, of rather a conical form, (inverted,) and furnished all around with draw-loops of, perhaps, a foot in length, and about two inches asunder: their whole number may amount to twenty, or more. On his left arm he bears a basket, containing as many eggs as there are loops attached to the platter.

Using one foot for a pivot, he keeps moving round by the aid of the other, so as make about ten revolutions in a minute, and, while in motion, successively takes the eggs from the basket, and, with his right hand only, puts each into a loop, drawing it tight, so as to retain the egg firmly in an equipoised state.

In this manner he strings all the eggs, and again unstrings and re-places them in the basket; he always moving the same way. When the whole are strung, the music quickens its time considerably, and the operator, conforming to the change, accelerates his pace in proportion, until the velocity acquired by the eggs is such, as to occasion their whirling on a level with the platter.

I consider this to be the most arduous of all the exercises in that branch which depends, principally, on delicacy and caution. If we consider how many chances of failure exist, whether from a slip of the foot, a want of attention to the due elevation of the elbow, the aptness of the unemployed loops to become entangled, the giddiness to be apprehended from turning full half an hour, with such speed, always the same way, and the possibility of allowing a newly-laden loop to fall into its place too suddenly, and the same in withdrawing it, when about to take out the egg; all these are certainly points very difficult to compass, or to avoid, and entitle the artist to unlimitted approbation.

I observe, in Cordiner's *Description* of Ceylon, some feats of the jugglers in that island noticed as being beyond compare; but I cannot conceive any thing more dexterous than that operation, so common in Bengal, of balancing a

bamboo ladder, about fifteen feet in length, on a man's chin, and allowing a well-grown lad, or a young woman, to ascend to the summit, by winding in and out between the steps, (which barely admit the body to pass,) and ultimately to descend, head foremost, in the same manner, after balancing, horizontally, with extended arms and legs, on either standard of the ladder. I have often wondered what the man's chin could be made of!!!

Swarming up a stout bamboo pole, of full twenty feet long, balanced on a man's hip, or shoulder, and descending again, by first attaching to the summit by the toes, and measuring a whole length downwards, the back being against the bamboo: then turning the opposite way, and thus, in alternate succession: always appeared to me equally dangerous and astonishing. To perform this, a man must possess unconscionable strength in his toes and ankles: the first slip would infallibly be the last!

The puppet-shows, called *kaut-poothes*, (*i. e.* wooden infants,) are certainly superior to Mr. Punch and his wife, as exhibited by various renowned persons throughout England. In India, there is to be seen far greater variety, both in the subject, and in the several dramatis personæ: there, something like a regular piece is represented; and it rarely requires a glossary, or interpretor, to define the several scenes; an aid,

without which our artists, in general, make but little impression on their spectators, whose imaginations are generally set on the stretch to divine the meaning of various antics, which, though abundantly ludicrous, seem to proceed from momentary fancy, rather than from any regular system.

The *kaut-pootly-wallah*, or puppet-dancer, does not confine himself to a small centry-box-like theatre; on the contrary, when he is to display before any respectable persons, he makes a point of paying his respects during the day, and of soliciting the loan of either a small tent, a *konaut*, a *sutrinje*, or some such article, for the purpose of enclosing and covering in the necessary space, so that he and his co-adjutors may perform their parts in secresy. It is commonly made a point that the performance should be by candle-light, and at some little distance from the line of tents. This is almost a *sine qua non* with this tribe, who, being in league with rogues of all descriptions, rarely fail to profit by the absence of servants from the charge of their masters' property, and, while perhaps both master and man are grinning at the objects presented on the *proscenium*, are employed in removing from the tents whatever articles, of a portable description, may be exposed to depredation.

Sometimes the farce is concluded by a shower of clods, &c., thrown from a distance, and the

whole fly in confusion. This is a device practised on the liberal, under the representation of the dealer in wood and wire-work, that some of the *nutkuts*, or frolicksome youths, of the camp, have battered the whole of the paraphernalia to pieces; in confirmation of which, some heads and tails of *ci-devant* kings and queens are produced. I was once much amused with an imposition of this kind, that was practised, with admirable address, upon a good-natured field officer, who actually credited the representation, and, in addition to the loss of several candlesticks, and some other small items, lent to the artists, compounded to pay for various fractures, simple and compound, sustained by the inanimate heroes!

Among the itinerant amusements of India, we must class the *nuts*, or tumblers, a people totally distinct from all the other inhabitants of the country, and who correspond, in a number of instances, with the gypsies of Europe. The following extracts from a paper furnished to the Asiatic Society by Lieutenant-Colonel D. T. Richardson, a gentleman of acknowledged abilities, and who has been remarkably industrious in obtaining a very complete acquaintance with the customs and languages of Hindostan, will display this matter in the best manner, and shew that a greater connection subsists, or at least has subsisted, between the *nuts* of Asia, and the

gypsies of Europe, than our literati are in general aware of.

At page 473, of the Asiatic Researches, we have the following passage. "Both the gypsies, and the *nuts*, are generally a wandering race of beings, seldom having a fixed habitation. They have each a language peculiar to themselves. That of the gypsies is, undoubtedly, a specimen of *Hindostanee*, and so is that of the *nuts*. In Europe, it answers all the purposes of concealment. Here, a conversion of its syllables becomes necessary." (*i. e.* in India.)

"The gypsies have their king; the *nuts* their *nardar-boutah*; they are equally formed into companies, and their peculiar employments are exactly similar: viz. dancing, singing, music, palmistry, quackery, dancers of monkeys, bears, and snakes. The two latter professions, from local causes, are peculiar to the *nuts*. They are both considered as thieves; at least, that division of the *nuts* whose manners come nearest those of the gypsies. In matters of religion they appear equally indifferent; we know that neither the gypsies, nor the *budeea-nuts*, are very choice on that particular; and, though I have not obtained any satisfactory proof of their eating human flesh, I do not find it easy to divest my mind of suspicions on this head. Indeed, one would think the stomach that could receive, without nausea, a piece of putrid jackal, could

not well retain any qualms in the selection of animal food.'

Colonel Richardson furnishes a number of words in use among the gypsies, which correspond immediately with others in the language of the *nuts*. I offer a few, which appear to me best adapted to the illustration of this point; observing, that the orthography used by the author, though perfectly correct, would not prove satisfactory to a person unversed in the Oriental pronunciation of the vowels. As a remedy, or rather an aid, absolutely necessary towards giving the European reader a perfect conception of the due intonations, I have, in this, followed my ordinary plan of spelling the Hindostanee words, in such manner as should enable a person totally ignorant of that language to pronounce them with propriety.

GYPSEY WORDS.	HINDOSTANEE SYNONYMES.	ENGLISH TRANSLAT.
Apra	Ooper	Above
Bebee	Beebee	Aunt, or lady
Pewnee	Pawnee	Water
Devus	Dewus	Day
Rattee	Raut	Night
Can	Caun	Ear
Dad	Dada	Grandfather
Valashtee	Behist	Finger
Mutchee	Mutchee	Fish
Gur	G'hur	House
Shing	Sing	Horn
Ballow.	Baul	Hair

GYPSEY WORDS.	HINDOSTANEE SYNONYMES.	ENGLISH TRANSLAT.
Shundee . . .	Soonaie	Hearing
Liccaw	Leckap	Writing
Dai	Dhye	Nurse
Mass	Mass	Food
Tod	Dood	Milk
Boot	Bote	Much
Nack	Nauk	Nose
Booro-panee . .	Burrah-pawnee .	Great water
Doriove	Derriow	River
Lolo	Loll	Red
Booro-chairee . .	Burrah-choory .	Great knife
Roop	Roopah	Silver
Saup	Saump	Snake
Dicken	Deckna	To see
Loon	Noon	Salt
Jow	Jow	Go
Kul-coe . . .	Kul-ko	Yesterday
Tschor	Choor	Thief
Dori	Doory	String
Rajah	Rajah	A lord
Ranee	Raunee	Princess
Raz	Raj	Principality
Banduk	Baundook . . .	Musket
Jemmadar . . .	Jemmadar . . .	An officer
Gour	Gor	Grave
Mul	Mool	Wine
Dur	Door	Jar
Jangustri . . .	Angootee . . .	Ring
Paka	Punk	Wing
Schut	Kuttah	Sour
Ker	G'hur	House
Sapa	Savon	Soap
Menghna . . .	Maungna . . .	To want
Pi	Pee	Drink
Metchana . . .	Patchana . . .	To know

GYPSEY WORDS.	HINDOSTANEE SYNONYMES.	ENGLISH TRANSLAT.
Me-dikaka . . .	My-deckata . .	I saw
Chabben . . .	Chabna	To eat
Tober	Tobula	An axe
Starrie	Sitara	Star
Rashee	Rishee	Priest
Bocolee	Bookap	Hungry
Por	Poor	Full
Geecoa	Jee-oo-ka . . .	Life, living.

The foregoing will suffice to give much insight into the affinity spoken of; especially when it is considered that the gypsey words are chiefly taken from Grellman's Vocabulary, wherein we are to make considerable allowances for German intonation, especially regarding the vowel u, and the dipthong oo, as in *dur*, and *door*; and for *dori*, and *doory*; the slight differences between which, so far as is connected with orthography, would probably disappear if the words were spoken by a German gypsey, and a *nut*, respectively. Add to this, that the natives of India use the letters L, and N, rather promiscuously: thus, they say either *leel*, or *neel*, (for *blue*); the capital of Oude is as often called *Nucklow*, as Lucknow, and the word *noon*, (*salt*,) is very commonly pronounced *loon*; as in the gypsey language.

If it is considered that the foregoing comparison did not take place at a time when Colonel Richardson had the opportunity to examine closely into the particulars, by having access to

European gypsies, whose familiar conversation, when explained, might have furnished numberless instances of accordance, which, from his accurate knowledge of the Hindostanee language, might ever have been such as to enable him to understand a gypsey colloquy; we must admit that strong probabilities exist, as to the *nuts* and the *gypsies* being branches from the same stock. Colonel Richardson observes, very properly, 'Should any real Hindostanee scholars ever investigate this matter *on the spot in Europe*, their evidence and observations will probably settle the matter effectually, one way or other, for ever.' He likewise remarks, that 'Grellman, from a want of knowledge of the Hindostanee, lost many opportunities of producing the proper word, in comparison with the gypsey one'— and again, he forcibly remarks, that 'It is not the accidental coincidence of a few words, but the whole vocabulary he (Grellman) produces, differs not so much from the common Hindostanee, as provincial dialects of the same country usually do from each other.'

That *cast*, or tribe, of *nuts*, known by the name of *bauzeegurs*, generally affect to follow the Mahomedan faith, but the *purneah peeries*, or *budeea* tribe, follow either that, or the doctrines of Brahma, just as may suit their purposes, or their locality. Either sect have so very few religious ceremonies, as to render it

doubtful whether they profess more than may serve to screen them from the imputation of atheism; a charge which would sink them even lower in the estimation of every inhabitant of Asia. They inter their relations in a very slovenly manner, and may often be found lying drunk about the grave: their marriage forms are extremely simple, the bride and bridegroom mutually mark each other's faces with red ochre, after which, they lock their little fingers together, and avow their union: the ceremony is usually concluded by a sacrifice to the muddled deity, in which all bear their parts with great eagerness, and devotion!

It is a rule among the *nuts* never to go to law, nor to submit their differences to any arbitrators, except of their own profession: owing to the extreme jealousy of the men, and the frequent excesses of both sexes in the use of *gaunjah*, and other intoxicating draughts, such differences are by no means rare, and contribute partly to the support of their rulers, who receive a fourth part of whatever is earned, or perhaps begged, borrowed, or stolen, by the several *sets* which ramble over the country, according to their own fancies, or as they may be ordered.

Such regular debauchery, added to the violent exercise undergone during their early years, reduce the period of life among these people to a very short compass. Few live beyond the age

of forty, and by far the larger portion fail of attaining their thirtieth year; the women generally fall victims after having borne four or five children.

With respect to dancing, which is a part of the duties of a female *nut*, much encomiun cannot be justly bestowed: their style of performance is vulgar, and they generally study that kind of lewd display, which renders their performances too indelicate to be described. Tumbling head-over-heels, walking upon their hands, Catherine-wheel, &c., &c.; all come within the display afforded for a trifling gratuity!

The traveller will sometimes be visited by sets of *nautch-girls*, who either reside in some of the principal towns, and make a point of offering their services towards the amusement of *gentlemen* traversing the country; or who are itinerants, that pick up a livelihood by rambling about, chiefly among the villages inhabited by Mahomedans, whose dispositions are more prompt than those of the Hindus to receive gratification from voluptuous exhibitions. Besides, the latter are generally more penurious, and are so rigidly tied down, both by tenet, and by the vigilance of their neighbours, as to have but little scope for indulgence in those sensualities, which the followers of the Prophet, who anxiously look forward to the enjoyment of the *houris*, are less scrupulous to conceal.

The greater part of the individuals composing the *taffah*, or set of female dancers, are either attached by family connections, such as marriage with the *oostauds* and *surmaunjahs*, who are the instructors and musicians; or they are slaves obtained by purchase during times of scarcity: some, indeed, are kidnapped when very young, on account of their promising features; these rarely are able to give any account of their parentage, and do not always know the districts in which they were born.

Whatever may be their origin, or their connection, the dancers, who are likewise vocal performers, are entirely subservient to some person, whether male or female, who is considered the proprietor of the *set*, and on whose application to any court of law, or to any *soubah*, or person in power, any run-away is immediately pursued, and restored to the *taffah*; whether the obligation be peremptory, such as in the case of a *baundy*, or actual slave; or merely implied, as in the case of a *paulah*, or person preserved from famine, &c., and reared in the capacity of a menial.

The Mahomedan law barely recognizes actual slavery, but makes a great distinction in favor of those who purchase, or thus adopt, children that would otherwise, in all probability, perish from want. The latter are considered to be the property of the patron, until arrived at their full

growth, which is understood to be about the age of eighteen; but this affords easy evitation to such proprietors of *taffahs* as feel an interest in the detention of any particular girls under their authority.

To say the truth, very little cause of complaint seems to exist on such occasions: the girls are usually well cloathed, and well fed; they are rarely limitted in regard to paramours, and, on the whole, experience as much comfort as their habits, and those envious traits ever to be seen among persons of the same profession, admit. Where these *taffahs* are found in the vicinity of our camps, and stations, whether civil or military, it is common to see the dancers attach themselves to some particular European gentlemen, of whose friendship they make much boast: the profits of such a speculation cannot be wholly reserved by any one of the party; they are supposed to be surrendered, without diminution, to the proprietor, for the general benefit of the *set*.

That full surrender is not, however, always made; on the contrary, some contrive to redeem themselves from this species of demi-slavery, by means of sums accumulated in the course of years, and concealed, with extreme solicitude, from the scrutinizing eye of the proprietor. When such a redemption takes place, it is never done overtly, but by the pretended interference

of some gentleman, or opulent native, who, either from love, or charity, feels disposed to pay the ransom: were the possession of the property to be acknowledged by the anxious female, it would instantly be seized as a *droit*, and she would probably undergo that severest of Hindostanee punishments, the loss of all her *kase*, or hair!

It is not uncommon for persons purchasing slaves, or rearing deserted children, to affix the badge of slavery immediately, and to cause it to be worn by the unfortunate being, thus devoted to tyrannical authority during life. This type of dependance consists simply of an iron ring, similar to those on light fetters, which is worn on either of the ankles, generally on the left: there it is rivetted in the usual manner, with the intention of being always seen. To remove the ring, is considered highly criminal on the part of all concerned, and should the slave be thereby enabled to abscond, would subject the abettors to payment of his or her value.

In every part of India the profession of a prostitute is devoid of that stigma annexed to it in Europe: persons following it are protected by law in certain privileges, and their persons are far from being held in abomination, such as we should suppose must be generated towards so impure a character among the moralists of the

East. This is entirely owing to the profession being hereditary, the same as other sects, and not promiscuous, or arising from vicious propensities, as we see daily the case among us.

It is true the term *kusbee* is used as a reproach; but that seems rather to refer to such as, like our wantons, degenerate in consequence of their libidinous dispositions, and are not attached to the two great divisions, the *meerasseens*, and the *puttareahs*, both of which have claims on the bounty of princes, and to exemptions from certain taxes; though, to make up for such indulgences, the *cutwals*, and other native officers, under whose authority they may reside, not only demand their attendance, whether to sing, dance, or what not, gratis, but impose upon them heavy assessments, in proportion to their repute and prosperity.

With the view to prevent the encrease of a certain disorder, which proceeds with rapid strides in that hot climate, it is customary to appoint a committee every month, at each great station, for the inspection of such dulcineas as may be resident within the bounds of the cantonments: such as appear to be diseased, are instantly confined to a small hospital, appropriated to their reception: a salutary measure, which doubtless prevents much mischief, and is superior to our Lock Institution, which

only offers, but does not coerce to, a proper course of medicine.

Such women as, being married, or living *under the protection* of any person, are found to indulge in variety, are designated *chinauls*, and are held in far greater disrepute than the professed *kusbee*, or common prostitute. As predestinarians constantly contradict, by their evasions of danger, the main principle of their creed, so do the good folks of Hindostan deviate widely from their system of ethics on this head; for, although adultery, under any circumstances whatever, is held up as a mortal sin, to be atoned for by death only; nevertheless, we find the males of all ages particularly bent on that kind of gallantry which comes within the letter of the law, and generally produces the contact of two persons whose *casts* are thereby respectively polluted. In a former part, I explained more fully the deceptions practised by native women retained by European gentlemen; it remains for me to add, that such is the spirit of intrigue prevalent among the people at large, that we may at least conclude the ladies in that quarter to keep pace with *the most enlightened* of our own population!

When a native, especially a Hindu, of high *cast*, suspects that his wife is guilty of infidelity, he generally proceeds to repudiate her in the most public manner; but it often hap-

pens that he is saved that trouble, either by the intervention of her father, brother, &c., who, under pretence of conducting her home, leads the offender to some lone spot, where, with his *tulwar*, he severs her head from her body, and deliberately leaves both to be devoured by jackals, &c. This office is likewise occasionally performed by the husband himself; who must, however, be careful not to betray his intention, lest a powerful dose, mixed among his *takorry*, (vegetable *curry*,) should prevent the completion of his design, or, possibly, cause him to fall a sacrifice to the lover's resentment.

A very curious instance of this occurred in 1789, wherein a sepoy, of my own company, was principally concerned. He had long been in the good graces of a woman who was married to a *sonaar*, (goldsmith,) then absent in another part of the country. The lady's father, who had no other child, on learning the particulars of the intrigue from one of her servants, remonstrated, but in vain. He then determined to sacrifice her, and ordered that she should quit her own home, for the purpose of being conducted to his house, which was in a village some miles distant.

Suspecting his intention, the adultress communicated the circumstance to her lover, who advised her to follow her father, and promised to prevent his doing her any injury. Accordingly,

she allowed her parent to precede her, as usual, (for no woman ever walks before a man, especially if it be her husband, or any relative,) until they arrived at a small jungle, when, as he was about to draw his *tulwar* to *sauf-kur* (literally, 'to make clean,' but, in the accepted sense, to kill, or destroy,) her, the lover darted forth, and, at one blow, took off his head.

The lady and her lover were both apprehended, and tried before the *zemindary court* at Benares, within whose jurisdiction the crime was perpetrated: against the woman nothing could be urged, she was therefore acquitted; the man was convicted, and condemned; but the woman, being next of kin to the deceased, and having the right, according to the law, of pardoning his murderer, instantly gave him her absolution in open court, and, to the great surprize and mortification of the whole court, returned homewards with her paramour, to persevere in the adulterous intercourse.

It was in vain that Marquis Cornwallis, on receipt of the intelligence, used every endeavor to obtain a revision of the proceedings: the Court were inflexible, and the parties could not, legally, be apprehended. His Lordship was, therefore, left without that redress he thought due to the public, and could only cause the sepoy to be dismissed from the Company's

service, and to be banished from the Company's dominions.

Where the law gives so absurd a power, it might be expected that scarce a husband would be safe; but that is not the case; for they, in general, act very decidedly, whenever they are made acquainted with the existence of offences against conjugal propriety. The caution used in conducting an amour is not always very great, but there is, in fact, only one difficulty to be overcome, viz. the obtaining admission to the interior while the husband is absent: that being effected, detection is not very easy, because, the immured state in which women are kept, offers the best screen against the curiosity of prying neighbours.

What with the dark color of the mud walls, the sombre complexion of the people themselves, and the shade commonly cast by heavy foliages, standing in the vicinity of villages in general, as well as by the over-hanging thatches, &c., it is not very easy, even for a neighbour, to ascertain, after night-fall, whether a person, having a cloth on the head, entering the sacred enclosure, be male or female.

About the year 1786, a laughable story was current, regarding a young officer who had a very pretty Hindoo girl in keeping, but who, being of a very salacious disposition, always endeavored to prevail with such young women

as came to vend fruits, or to sell *choories*, &c., to be his inmate. One of these daily visitors held out against every temptation, which so roused the youth's passions, that he resolved to obtain that by force which money could not purchase. The struggle made a terrible discovery; the supposed damsel proving to be a young Portugueze drummer!!!

The ordinary mode of conveyance adopted by the generality of *nautch-taffahs*, is the common *hackery*, called a *g'horry*, which has two wheels, with a square body, as has been already described; in one of these, four or five crowd together, sitting almost back to back, and allowing their legs to hang down on every side. The generality are of very decent behavior, but, when they get a little *majoom* (a sweatmeat prepared with *b'haug*) into their noddles, it is not uncommon to see them proceed in high style, singing away in full chorus, and, occasionally, exhibiting specimens of their profession, by attitudes corresponding with the words of songs purely Cyprian!

The baggage, if any, is commonly carried on some hired bullock, or in a *hackery*; some *sets* are, however, so opulent, as to be able to keep one or two camels, and to purchase a tolerably good Hindostanee tent, that is, without walls, and supported by two bamboo poles, each about eight or nine feet long.

The baggage of Europeans is, ordinarily, carried on elephants, camels, bullocks, *hackeries*, or *coolies:* of late years, a great improvement has been made, by taking off the body of a gig, with its shafts, and substituting a frame, made on such a plan as may serve to contain several trunks and liquor chests below, while a cot, with all the necessary bedding, having over them a painted canvas canopy, covers the whole, and keeps every part compact and dry. Such a conveyance, with a tolerably stout horse, is found to get on far more expeditiously than any of the others.

With respect to elephants, it may be said, that they are either the best, or the worst, carriage: in the low countries, where the soil is often soft for the greater part of the year, the elephant is certainly a most useful animal; his feet being broad, and his power so great as to enable his acting with decision and energy at the moment of difficulty, qualify him, almost exclusively, for the transportation of tents, and heavy baggage, in such parts of the country as remain heavy or swampy during the more settled part of the year.

Though we may suppose, that, previous to the plains of Bengal being cultivated, they were over-ran with elephants, the same as other parts of India, of which that animal is a native, still it should seem, that their principal haunts

must have been along that hilly wilderness in which they are now found in a gregarious state. It is well known that the elephant thrives best near the sea, that in its vicinity he attains his greatest bulk, and is exempt from various diseases, especially the opthalmia and the dropsy, both of which attack at least four in five of such as are removed to dry soils. This circumstance, as well as the peculiar formation and substance of the foot, appear to render the elephant peculiarly appropriate to the use of such persons as have occasion for carriage-cattle (*i. e.* cattle that bear burthens) in the lower provinces.

Endued with wonderful sagacity, the elephant will only proceed on soils which bear him up to a certain extent: so soon as he feels a peculiar vibration, that indicates a want of firmness below, he instantly declines further progress, and, turning round, or receding, with more activity than his clumsy form may indicate, hastens to quit the apprehended danger; and, without regard to things or persons, makes the best of his way to *terra firma*.

Sometimes, however, this majestic animal gets bogged, and, notwithstanding his immense strength, becomes completely incapable of self-extrication. On such an occasion, nothing more is necessary than to supply him with abundance of straw, or cut grass, tied in

bundles; these he forces down with his proboscis, till they are under his feet respectively; and, by their accumulated resistance, afford the means of gradually bearing up, and of raising him to the surface. His egress is ensured by an ample stock of the same materials, together with faggots, &c., thrown before him, in number sufficient to form a kind of path-way, along which the elephant moves with wondrous caution: on such an occasion, he should, like a mule on a mountain, be left to himself, as he will manage with perfect prudence; whereas, if actuated by a *mohout*, (or driver,) he might be again plunged into difficulty.

The stature of elephants, in general, may be rated between seven and nine feet: the former is the standard at which they are admitted upon the Company's establishment, at the value of five hundred sicca rupees each (£65). Provided the animals be stout, and competent to carry a proper burthen, such blemishes as would depreciate them considerably among the natives, who entertain many prejudices in this particular, are not considered.

The principal defects, in the eye of a native merchant, are,

1. A broken tail; or a deficiency of the forked hair at its termination. The former arises from the habit the elephants are in, of laying hold of their opponent's tails with their

trunks, and of twisting them so, that, occasionally, they are absolutely snapped, or, perhaps, tumefy, and, in the end, sphacelate.

2d. An uneven number of claws to the feet: there should be five on each fore, and four on each hind foot.

3d. Bad tusks; that is, such as are decayed, or, having been broken in contests, cannot be rendered ornamental: an elephant born with only one tooth, or tusk, is highly prized, as being sure to overwhelm its owner with good fortune.

4th. Having a black, or spotted palate; either of which is supposed to be an indication of bad health, as well as of misfortune.

5th. Bad eyes; though sometimes we see very serviceable elephants totally deprived of sight, which travel admirably with burthens, but are unfit for the *howdah;* these are extremely careful to put their trunks forward as they proceed, whereby they are warned of any hollows, &c. Blind elephants are peculiarly attentive to the words of command given by their drivers.

6th. The want of hair on the forehead, lean jaws, small jagged ears, narrow feet, thin legs, short bodies, and a contracted barrel, or carcase, are all objectionable, and become serious objects of attention in the purchase of this animal. An

European, not accustomed to view elephants critically, would conclude that little variety, in the above respects, would be found; but there are certainly as many estimable, or agreeable, points in a fine elephant, as in a fine horse; though we rarely look so narrowly into the perfections of the former, on account of being less in the habits of cherishing, or of driving, them in person.

According to the regulations, an elephant ought to be able to carry twenty-five maunds, which is within a twenty-sixth part of being a ton; but, although the several contractors stipulate, without hesitation, that their elephants should be able to carry that weight at all times, not one in a hundred of those in the service, or in the possession of individuals, could bear it even for one day's ordinary march, which should not exceed eight *coss*, (sixteen miles,) all beyond that being considered a forced march.

The elephant is furnished with two pads, of which the under one, called a *guddaylah*, is commonly made of red *karwah*, stuffed to the thickness of an inch and a half with cotton, and well quilted. The upper pad, called a *guddy*, is made of *tawt*, which is a narrow kind of very coarse canvas, and is stuffed very hard with straw to about the thickness of six inches. These are put on, the one over the other, and firmly se-

cured to the body by means of stout ropes passing round the whole, as well as under the tail, by way of crupper.

Such a thickness may appear too great; but it is to be considered that an elephant ought, by the contract, to carry either four common marquees, each weighing, when dry, 425lb., and, when wet, 597lb.; or six private tents, each weighing, when dry, 275lb., and, when wet, 426lb. Therefore, when I take the medium at twenty-five maunds, it is but striking a fair balance.

An ordinary elephant requires two servants; namely, a *mohout*, or driver, who sits upon his back, and guides, by means of a crooked instrument of iron, called a *haumkus*, aided by words of command, and the application of his toes behind the animal's ears. The other servant, called a *cooly*, or grass-cutter, performs all the more menial offices, such as taking the elephant out for *charrah*, *i. e.* fodder, of which it can carry as much as will suffice for two, or, if well laden, for three days.

The feet of an elephant require considerable care; they being extremely apt to chafe, and wear away, at the soles, so as to render him completely unserviceable for a time. This generally happens where the soil is dry and harsh, as throughout the upper country, but may be, in a great measure, prevented by *paying* them

with astringent applications, so that the skin may be rendered harder, and the foot, in general, somewhat callous.

When an elephant is chafed on the back, the part is usually rubbed with *ghee* and turmeric, and the pad cushi ned so as to raise the spot under which the excoriation may be: if suffered to continue in a state of irritation, the smallest sore will speedily assume a most formidable appearance, owing to the peculiarly cellular formation of an elephant's flesh.

The mode of catching elephants for the public service is very simple, requiring more perseverance than skill, yet attended with a heavy expence. In those wildernesses near Chittagong, Tipperah, &c., along the eastern boundary, some hundreds, or perhaps thousands, of villagers are assembled, who form a circle around those herds they may find, and gradually frighten them into a kind of trap, called a *keddah*, of which the entrance is of a crescent form, leading to a large area, properly enclosed by an immense trench, and by large piles well bound together. After a while, the animals are driven, or induced, into a smaller area, from which they are taken into a narrow passage, for the purpose of being secured, and led away to the stands, at which they remain until completely tamed.

It was formerly the practice to break their

spirit by privations and severity; but, of late years, it has been found preferable to sooth as much as possible; a change which has been attended with the most happy results. So far has this plan succeeded, that many elephants are now better reconciled in one month than they formerly were in four or five; while, at the same time, many inconveniences, especially those severe ligatures, which invariably made desperate sores about the ankles, &c., are almost wholly avoided.

The practice of decoying the large single males, which separate from the herds, and are called *sauns*, or *goondahs*, is extremely curious: two or three females are generally sent out for the purpose of inveigling the ferocious males thus ranging about. Such female elephants, which are called *k'hoomkies*, are highly valuable, especially if they be large, and attached to their *mohouts*, whom they will protect to the last moment, if accidentally discovered by their intended prize while passing the ropes around his legs. For a particular account of this, which can scarcely be rendered distinct but by the aid of plates, I refer my readers to 'THE WILD SPORTS OF THE EAST,' published from my designs and memoirs by Mr. Edward Orme, of Bond Street, and Messrs. Black, Parry, and Kingsbury, of Leadenhall Street.

Contrary to the opinion formerly current, it

has been ascertained that elephants copulate in the same manner as other quadrupeds. This has been certified by Mr. John Corse, the resident Surgeon at Tipperah, who established a breed of elephants at that place; whereby much insight has been obtained regarding the natural history of this noble animal. When Mr. Corse transmitted that account which may be seen in the third volume of the Asiatic Researches, he had not the opportunity of ascertaining the period of gestation, which has since been found to give an average of about twenty-two months.

That less time could not be required, was evident from the incipient portion of that gentleman's researches; as a female elephant, taken in January, 1788, did not produce her calf, which was thirty-five inches high at his birth, and grew four inches in as many months, until the 16th of October, 1789.

Elephants are invariably measured at the shoulder, and not on the arch of the back, the want of which is to be considered as indicative of age.

Elephants are to be found along the whole extent of frontier, ranging from the Chittagong district, to the very borders of Thibet. They become more scarce, and are, besides, less robust, and of smaller stature, in proportion as they recede from the sea coasts. Those sent yearly,

by way of compliment, or of tribute, from the Rajah of Napaul, are by no means to be compared with the *coomaeeahs*, and *mooknahs* of Tipperah, and Chittagong, whose form and bulk certainly entitle them to superior estimation. Some of these are, occasionally, sold for immense sums to the native princes in the upper parts of Hindostan. Two thousand rupees are held to be but a low price for a male of nine feet in height, provided his teeth are large, even, and of regular curves: sometimes elephants, of extraordinary bulk, and of remarkably fine points, have reached to eight or ten thousand rupees.

The expence of keeping an elephant will vary according to the situation, and to the general services wherein it is employed: in the Dacca district but little expence is incurred, unless hard labour is to be performed, there being abundance of *d'hul*, (grass,) and of foliage, of which the animal can always obtain an ample supply gratis. There, a *mohout* rarely receives more than three rupees monthly, and a grass-cutter more than two. I have shewn, in describing the servants necessary to be retained in a gentleman's suite, that the wages of these menials are generally much higher; which, when added to the average charges for food, chiefly *badjra*, or millet stems, which must be paid for, and rice, or barley, perhaps to the extent of 30lb. daily, will cause the expence of

maintaining an elephant in the upper provinces, to amount to full thirty, or thirty-five, rupees per mensem; and that, too, exclusive of the wear and tear of gear of all kinds. On the whole, we may compute that an elephant, well kept, will cost full forty rupees (£5.) monthly. When we consider that, in England, few gentlemen keep their horses for much less, and that an elephant performs so much essential drudgery, indeed, equal to a team of three stout cart horses, also that the value of money in India is not half so great as with us, we may deem the above aggregate to be very moderate: the misfortune is, that an elephant is not, like a horse, promptly or generally useful; and that, owing to the nature of the climate, as well as of the soil, months often elapse before the proprietor of the former may be able to avail himself of the valuable powers of his sable property.

Camels are very generally kept by the officers of the army throughout the upper provinces, that is to say, above the Delta of the Ganges, where the soil is more appropriate to their form, than those muddy, slippery, tracts, in which these animals are extremely subject to fall. When such an accident happens, it is a great chance but the animal is rendered useless; as, owing to the great length of the hind legs, and to the want of any membranes, or muscles, calculated to prevent their easy divergence in diametrically

opposite directions, the pelvis is extremely apt to split, and the power of extrication, or even of support itself, is entirely lost to this very valuable quadruped.

Though we generally attach the term '*camel*' to that species of the *camelus* found in India, where great numbers are bred by persons who make a very large profit from their labors, the animal under consideration, having but one hump, or bunch, on its back, should, properly, be called a '*dromedary*.' Whatever may be the true designation, the utility of the animal in a climate, and on a soil, to which it is so admirably suited by nature, is indisputable; but, with regard to its powers, as described by naturalists, or by travellers, I must beg leave to enter a partial dissent.

I have now before me a very respectable publication, wherein it is said, that 'a camel will carry a weight of 1,200lb., and will perform a journey of three hundred leagues in eight days.' Now, my own experience convinces me very fully that few camels will carry more than eight maunds, when making, on an average, stages of from fourteen, to sixteen, or, at the very utmost, twenty miles within the day, for two months; allowing a weekly halt.

So sensible are the Government of India of the inability of a camel to perform any thing like the service above described, that, in all their con-

tracts, in which it must have been seen they take care so to proportion the burthens, that none but the choicest of cattle could move under them, it is especially detailed that such camels as may be admitted upon the Company's establishment of carriage-cattle, should be rated in the proportion of three camels to one elephant; which, in other words, assigns to each a burthen composed of two private tents, the weight of each, when dry, being 275lb., and, when wet, 426lb.; including poles, pins, mallets, bags, &c.

Taking the medium as a standard, *i. e.* one wet, and one dry tent, the average burthen would be only 701lb., which will be found a greater load than any camels, setting apart perhaps one or two of extraordinary powers, which have come within my observation, could carry in a proper manner, so as to answer general purposes, when marching with a regiment.

The value of a camel varies according to size, form, age, condition, and disposition: supposing all those points to be mediocrity, from eighty, to a hundred and twenty, rupees may be taken as a standard; observing, that, where no military movement is in question, the prices are often lower, and that, in cases of emergency, they have been known to rise even so high as to four, five, and six, hundred rupees: but such, fortunately, is very rarely the case.

Most gentlemen keep two or three camels, for the purpose of carrying their tent, liquors, and cot. If on a moderate scale, two will generally prove competent to the work, but if the tent be large, the liquors and linen abundant, and the cot extensive, or on a heavy construction, a third camel will be necessary. In fact, I know not of worse policy, than that we too often see adopted, of burthening an animal with as much as it can stand under. When the moment of difficulty comes, as it rarely fails to do, infinite vexation, and an enormous encrease of expence, invariably follow. Hence, it will be found advisable, though the primary expence may be encreased, and the subsequent monthly charges be a trifle greater, always to retain three, in preference to two camels; unless the intended burthens be very compact, and not subject to accumulate a great addition of weight in wet weather.

The difference shewn to exist between tents, when wet, and when dry, according to the Company's standard, ascertained by actual experiments, should prove a guide to all persons about to proceed on a march, so to proportion the loads imposed on their cattle as not to endanger their total failure. It should never be forgotten, that excoriations, however trivial in the first instance, speedily rankle into wounds, not simply painful, but generally trenching deeply on the immediate

powers, as well as on the condition, of those useful dumb animals, which submit to the last moment to the will of their heedless employers.

Camels, as well as elephants, lie down, so as to bring their stomachs to the ground, while receiving or discharging their burthens. At such moments, the former are extremely irritable; snarling, and watching the opportunity for biting. To say the best of these animals, they are never to be trusted, their dispositions being, for the most part, sanguinary and treacherous, although they are not carnivorous, being fed chiefly on *gram*, and chaff of various kinds: a camel, like the bull-dog, rarely lets go his hold.

The expence of maintaining a camel may be averaged at about four or five rupees monthly, exclusive of its portion of the *surwan's* (*i. e.* the driver's) wages: the large crook saddle, with its *jolah*, or canvas trappings, and its *saleetah*, or canvas sheet made of *tawt*, for the purpose of lading tents, and especially for bringing in chaff, may be averaged, for wear and tear, at about a rupee monthly. From this it will be seen, that if a *surwan*, attending three camels, should receive six rupees for pay, and that each of the camels should cost six more, the whole expence, amounting to twenty-four rupees per mensem, would fall far short of that incurred by one elephant.

The advantages attendant upon an elephant, are, that the load is all carried compact and

entire; that he can travel in swampy districts, where no other animal could proceed at all; and that he is serviceable to ride upon, and to join in the line to beat hogs, and other game, out of heavy covers. On the other hand, a camel will travel on those dry soils which destroy an elephant's feet, without sustaining the smallest injury; he is more patient under heat, and the absence both of fodder and of water; his prime cost is considerably less; his maintenance cheaper; and, where a division of carriage becomes necessary, one camel may be sent off, while the others are retained. But camels rarely thrive if exposed during the rains; hence, it is customary to build sheds for their reception during that season: this, however, is done at a very trifling expence, and might, doubtless, be dispensed with altogether, at least in the upper provinces, if young animals were to be purchased that had never been so domesticated. Few gentlemen retain their camels while serving near the Presidency, where fodder is at a most enormous price, and where the mange commonly attacks within a few weeks after arrival.

The heavy, awkward, and apparently slow, gait of the camel, generally induces to a belief that its rate of travelling is disadvantageous, inasmuch as it may denote inability to keeping up with the generality of elephants. This, how-

ever, is a great mistake, for it is very common to see the latter, when in the least over-burthened, or when the weather is hot, or the road sandy, very late in arriving at their destination; whereas, the camel, under an appropriate load, will move on at a regular pace, generally making a distance of seven feet, as I have repeatedly ascertained, from the centre of that spot whence it lifts a foot, to where it again sets it down: few elephants do so much; they walk quicker, but their strides are rarely so extensive.

The propensity of a camel to stale, so soon as eased of his burthen, renders it indispensably necessary to drive him to a distance so soon as the tent is off his back; otherwise, the urinous stench attached to the spot would render it very unpleasant, or, rather, insupportable. The native chemists extract large quantities of ammonia from those stands where camels have been kept for many weeks.

The greatest inconvenience attached to a camel is his utter inability to swim across a river, such as any other animal would consider no impediment. It is true, that, occasionally, camels may have been seen to swim for a few yards, but, in general, they turn upon the side, and, unless instantly rescued, would infallibly be drowned. Perhaps this arises from the general roundness of their bodies, which are very easily acted upon by the super-incumbent weight of the neck and

head, that become levers, not sufficiently opposed by their almost fleshless limbs. Some camels enter with readiness into ferry-boats, even of the rudest construction, while others require to be urged by the display of fire in their rear, or even by the actual cautery! When once on board, they are generally quiet, but do not seem to entertain such a dread of their insulated situation as horses do.

In this particular, the elephant has a most decided superiority: he enters the water with alacrity, and, guided by the *mohout*, who preserves his seat on the animal's neck, until the latter may, by way of frolic, descend to walk on the bottom, keeping, at the same time, the end of his proboscis above water, makes his way to the opposite bank, though perhaps a mile distant. If there be occasional shallows, whereon he can refresh himself, two or three miles are passed with equal facility.

In their wild state, elephants cross very large rivers in herds; the young ones swimming by the sides of their mothers, which, occasionally, support their gigantic calves by means of their trunks, either passed under the body, or slightly hooked in with the young one's proboscis. When domesticated, elephants lose much of their natural energy in every instance; and, in lieu of viewing a tiger without fear, gradually become so timid, as to be dreadfully agitated at

the sight, or smell, even of a dead one: hence, in tiger-hunting, those elephants which are more recently taken from the *keddahs*, provided they be sufficiently trained to be safe in other respects, are usually best suited to the sport, and afford their riders a better chance of success.

Those who cannot afford, or who consider it unnecessary, to retain either an elephant, or camels, usually purchase, or hire, bullocks, when about to march to any station not very remote. Some, indeed, prefer them altogether; but, after having given them more than one trial, both from necessity, and from the persuasions of others, my mind is made up to the full conviction, that, although rarely costing more than sixteen or twenty rupees each, (that is, from forty to fifty shillings,) they are the most tardy, the most troublesome, and the most expensive, of all the beasts of burthen in question!

Knowing, from dear-bought experience, that a bullock which can carry five maunds is a *rara avis* of its kind, I was much surprized to find, in Mr. Colebrooke's little treatise on the Husbandry of Bengal, an assertion, that the enormous 'load of 500lb. of cotton is generally carried from Nagpore to Mirzapore, a distance which, by the shortest route, exceeds four hundred miles, in journies of eight or ten miles

daily.' That some remarkably fine cattle are bred in the Nagpore district is well known; but I should have greatly doubted, under any other than the highly respectable authority alluded to, whether it would be possible to select, in all Bengal, a sufficient number of bullocks, bred in the country, to carry on the extensive trade between Nagpore and Mirzapore, under the circumstance of carrying 500lb. as an ordinary load.

I have possessed very fine bullocks, such as could not, generally, be obtained for less than a hundred rupees the pair, and I have had occasion to rely on their services; but found, that, whenever they were laden beyond four maunds, (320lb.,) they became restive, and required many extra hours to perform a march of twelve or fourteen miles, even on excellent roads, and when in far better plight than *mahajuny* (trading) bullocks are commonly seen.

But let us refer to the regulations of the Company respecting cattle to be admitted upon their establishment; we shall there find, that one Mirzapore bullock nearly equals three of them. 'The standard of cattle to be retained for, or received into, the service, is not to be less than fifty inches for the draft-bullocks, and forty-eight inches for the carriage-bullocks. Each carriage-bullock shall be competent to

carry a burthen of *one hundred and eighty pounds* weight, exclusive of his pad.'

Now, it is well known the Company employ excellent cattle, and take care to have justice done them; as, indeed, they are fully entitled to expect, when they allow no less than thirty sicca rupees for each bullock purchased on their account; especially, as any distance beyond sixteen miles, or when laden for more than nine hours within the twenty-four, or when carrying more than 180lb., come under the denomination of a forced march, and subject the Company to all risks.

I should rather apprehend that an error has crept into Mr. Colebrooke's otherwise most accurate calculations, owing to a *cutcha-maund* of five *paseeries*, (of 10lb. each,) being in general use in that part of the country. Five of these maunds, of 50lb. each, make a *tungy*, which is the common load for cattle carrying iron, and other dead weights. Therefore, if we estimate the general burthen to be in *cutcha* (*i. e.* small) maunds, we shall find the result to be nearer the ordinary result, than when we take 500lb. for the amount of a load. It is a well-known truth, that a private tent, with its poles, pins, mallets, and bags, is an ample load for any bullock, even in its dry state, and that, when wet, it must be a choice animal that is competent to bear it for even a very few miles.

In some of the very stony parts, it is usual to shoe the bullocks, the same as is practised in many parts of England; but, in general, that is not found necessary. The saddles and pads must be properly attended to, and the loads should be well strapped on; otherwise, owing to the skittishness of the cattle in India, and their disposition to lie down, very frequently, in a day's journey, considerable injury must be sustained, by such articles of lading as may be subject to breakage, from such a practice.

However great a drawback such a propensity may appear, it is found, that liquors may be safely trusted to be conveyed by bullocks; but, in order to ensure the bottles from breaking, it is found necessary to pack every one of them separate, wrapping round it a small loose band, of that soft kind of hemp known by the name of *paut*, and stitching the several rounds together in the same manner as Florence oil flasks, &c., are enveloped by small bands of fine straw.

The *paut*, above mentioned, is grown in every part of the country, but chiefly in Bengal, where it attains to a considerable diameter, perhaps an inch and a half in diameter, and often grows eleven or twelve feet high. About three years ago, I presented a specimen of *paut* to the Bath Society, measuring more than ten feet in length: it was the remainder of a quantity in

which I had packed some bottles when quitting Bengal, and had never been so much as put to the hackle.

Nothing is so effectual as this material towards preserving bottles from fracture; when properly wolded, they may either be packed in boxes, &c., without any addition of straw, &c., or they may be advantageously put into strong bags of *tawt*, and thus, with seeming negligence, be carried on either side the bullock. I have several times adopted this mode, and found it by far the safest, as well as the least expensive, and best suited to the animal. By it, the necessity for boxes was obviated, and a good bullock could easily carry five dozens of wine for any length of time, and for any number of miles, a regiment would commonly march.

When tents are carried on oxen, it is necessary to divide the load as equally as may be practicable; observing, that those which have to carry the two *flies*, ought not to be encumbered with mallets, pins, &c., as it is a great desideratum to make sure, as much as practicable, that the flies, the pole, and a certain portion of pins, together with a mallet or two, should arrive early; it being of less consequence if the bullocks bearing the walls, *satrinjes*, &c., be somewhat later; since the main part of the operation of pitching the tent, consisting of raising the *flies*, may be performed, and shel-

ter afforded, without the walls, &c., being present.

Although a very large stout bullock may, here and there, be found capable of carrying a pair of cloaths-trunks, with a small cot above them, such must not be generally expected. The trunks will, if properly constructed, sit close, as they do on a camel; but the cot will assuredly swag, so as to cause great unsteadiness of gait, and subject the animal to chafe under the pad: besides, the disposition of most bullocks is such, as by no means to warrant the lading them with any article subject to great injury from a fall.

I have already said the bullock is the worst kind of carriage used in the army, but for draught it is essentially serviceable; in fact, without this animal, I know not how the service could proceed in India. A great deal, however, depends on breed; and no less on due feeding and proper exercise. Only certain parts of the country, such as the Purneah and Sircar-Sarun districts, are found to produce oxen of a standard and frame suited to the ordnance department; in which, on the Bengal Establishment alone, full five thousand head of cattle are employed, exclusive of a large establishment of elephants and camels, allotted to the conveyance of camp equipage.

The proportion of bullocks allowed for the

draught of field-pieces of various calibres, with which they are expected to keep pace with the ordinary rate at which troops march, are as follow:—

To a 24	Pounder	24 Bullocks.
. 18	Ditto	18 Ditto.
. 12	Ditto	12 Ditto.
. 6	Ditto	6 Ditto.
. 3	Ditto	4 Ditto.
. 8	Inch Howitzer	14 Ditto.
. 5½	Ditto	10 Ditto.
. 4⅖	Ditto	6 Ditto.
.	Artificer's Cart	10 Ditto.
.	Tumbrel	6 Ditto.

It may surprize those who are personally unacquainted with India, to learn that horses are very little employed in carriages. I have already shewn, that, with the exception of the *r'hunts* let out for hire about Calcutta, of which some are drawn by one, or by two *tattoos*, all the vehicles in use among the natives, and all the laborious part of whatever may relate to building, trade, and agriculture, are consigned to oxen; of which the prices are, in some places, so low, that a small pair, fit to be worked at a well in a gentleman's garden, may usually be had for about ten rupees (*i. e.* 25*s.*); while the generality of husbandmen rarely pay more than six rupees (15*s.*) for a pair, such as are adequate to the very insignificant tillage bestowed on the soil.

The indigenous breed of horses, if Bengal can boast of any such, is remarkably small, hardy, and vicious: to me, however, it has ever been a doubt, whether this breed, called *tattoos*, be not a degenerate race from some supply obtained, at a very remote date, from Durbungah, and the districts ranging under the northerly frontier. That breed, generally distinguished by the appellation of *serissahs*, is again questionable, and may, in all probability, be traced to the *tazees*, bred in the Maharattah country, and in every part of the *Punjab*.

Considering the great strength and perseverance of *tattoos* in general, it is rather surprizing that they are not put to more purposes, than merely serving to carry a load on a march, or to convey some infirm, or rather affluent, traveller, when moving from one part to another. As few castrations take place among the males, and the sexes are allowed to intermix without restraint, the species would multiply rapidly, were it not that little care is taken of the pregnant mares, and less of the progeny; which usually has to shift for itself, and to cut its own grass wherever a scanty meal may be obtainable. If a selection were made of the *tattoos*, male and female, fitted for breeding from, there might be established a supply of cattle, far more useful to the peasant, than those miserably defective oxen which, in spite of the professed

veneration of all Hindus towards those sacred animals, are often kept toiling at the plough until nature interposes in behalf of the worn-out deity, and compels the reluctant peasant to allow the hour of dissolution to pass on in peace.

The Company, with a view to obtain a certain, regular, and efficient, supply of horses for their cavalry regiments, have, for about seventeen years past, maintained an establishment for breeding from select mares in North Bahar: the liberality with which this has been supported, and the admirable selection made of persons for the management of every branch, should give the most favorable result; especially as the spot chosen for its site is peculiarly eligible in point of grazing.

But it does not appear that the expected benefits have been produced. I recollect seeing a splendid calculation, made about the year 1794, which went so far as to demonstrate, that, by the end of the twelfth year, full fifteen hundred horses would annually be supplied from the stud. Seeing that an agency still exists for the purchase of cavalry horses, and knowing that the whole strength of the light regiments of cavalry do not exceed six thousand horses, even including the body-guard, we may reasonably conclude, that the stud is by no means competent to furnish one-fourth of that number within the year!

The *tattoos* of Bengal rarely grow to the height of twelve hands; they are slight limbed, and cat-hammed; but carry immense burthens during a day's march, and are no sooner turned off, having their fore-feet tethered, than a general war seems to be proclaimed among all of the tribe that may be within sight or hearing. Kicking, biting, and gallantry, are the order of the day; and woe betide the incautious wight who should, at such a time, approach within reach of their heels!

Few *tattoos* ever have the *bursautty;* a peculiar breaking out about the legs, (by no means resembling the grease,) to which horses, in general, are extremely subject throughout the low countries; especially if their standing be not remarkably dry, and exercise given in proportion to their allowance of *gram;* which is a species of pulse, growing on a low plant of the tare kind, and commonly sold at about a rupee per maund.

Of this *gram*, a horse will eat from three to six seers, (of 2lb. each,) according to his size or appetite; half in the morning, and half at night. When high fed, and but little rode, the most valuable horses, in particular, become victims to the *bursautty;* which, though it disappears in the spring and summer, invariably returns, generally, too, with encreased force, during every rainy season. As yet, no cure has been dis-

covered for this ruinous disease, though numbers of gentlemen, of eminent abilities, have devoted their attention towards its eradication: its abatement has, in some instances, been effected; but, notwithstanding the utmost skill and perseverance, the blotches have returned, in sufficient force to satisfy all medical men, that no decided mode of treatment, and no general specific, has, hitherto, been established.

The exemption of *tattoos*, for the most part, from so formidable a distemper, seems to indicate their peculiar fitness for the climate: it matters not whether nature first planted them on the soil, or whether, by long continuance, they have become habituated to it, so completely as to defy that virulence with which the climate attacks strange animals. Wandering among all the puddles and jungles at every season; and subsisting on the remains of temporary verdure; ultimately, indeed, browsing, or devouring, the withered remains of long grass; these useful animals contract no disease, save what may be engendered by such absolute scarcity as would go nigh to starve a donkey!

The next breed of horses, in point of strength and hardiness, is the *tanian*, a small kind, obviously distinct from all the other breeds of India, and peculiar to the Thibet and Bootan countries, that lie at the back of our eastern and northern frontier, all the way from Assam to

Sirinagur: allowing for the intervention of the Nepaul Rajah's dominions. These horses are, with few exceptions, piebald; though a few are seen entirely of one color. The breed may be characterized in a few words, viz. that they are remarkably stout, hog-maned, have short bushy tails, very short necks, and large heads.

The Bootan merchants, who come down yearly with various articles of manufacture, such as mats, cloths, &c., of a very peculiar kind, by no means displeasing in their patterns, commonly lade their goods upon *tanians*, which they dispose of ultimately for a small sum, perhaps from twenty-five to sixty rupees each; reserving, however, a few, whereon to transport the British woollens, and other articles they obtain from the produce of their sales.

Great numbers of the natives of Bengal, who are in good circumstances, or are obliged to attend daily at particular offices, &c., ride on *tanians;* which, though not to be termed quiet, are far more so than *tattoos* in general. These good folks abominate a *trot*, as being uneasy and heating; and not one of them would so far demean himself as to be seen gallopping! This has given rise to the general adoption of that unnatural, but very easy, pace called the 'amble,' in which a horse moves the fore and hinder feet of the same side at one time. It is singular, that this mode of going should be so

pleasant in a horse, when, in the elephant, whose natural mode of gait it is, there should result from it the only inconvenience with which the motion of that animal is attended.

Tanians rarely exceed thirteen hands in height, but their powers are wonderfully great; they are capable of enduring great fatigue, and, though by no means sightly in a chariot, will perform journies equal to what might be expected from larger animals. In general, they are rather fiery, but, by gentle usage, shew sufficient coolness and temper for most purposes. Like most mountain-bred horses, they are sure-footed, and, when left to themselves, pick the best road with great circumspection; proceeding at an easy pace, which they will keep up for many hours. I know not of any breed better qualified for drawing a light small chaise, where great speed is not wanted; but figure must be out of the question.

The *Serissah*, or *Durbungah-tazee*, derives its name from the places where great numbers are bred. These horses are generally of a light make, and, when young, promise to turn out well; but, as they approach their full standard, lose many good points, and, for the most part, become rather vicious. They are, however, extremely serviceable as hacks, and generally make good hog-hunters: occasionally, valuable horses are found among them; and it is to be

hoped, that, as the Company's stalions are let out at low rates, to cover such good mares as may be tendered at their stud, there will soon be effected an immense improvement in the general stock of North Bahar.

This, in fact, seems to be one of the prominent features in the establishment of the stud, and promises to become very conspicuously successful; though it is to be lamented, that the native breeders, owing to a want of liberal ideas, and of expanded views, are too apt to adopt that narrow policy, which prompts to the doing that badly for sixpence, which may be well done for a penny more! Time will probably overcome such an absurd system, and convince them that the payment of a few rupees, or the subscribing to certain regulations, adopted for the general improvement of property, so far from being detrimental, are the surest means of obtaining a substantial profit, in the most speedy manner.

There are annual fairs, called *maylahs*, in various parts of the country, where the horses of this breed (*i. e. serissahs*,) are exhibited in immense numbers. The greater part of them are exposed annually at Buxar, and are purchased by the natives, either for their own use, or for re-sale in various parts. It is curious, but true, that, some years ago, a great number of horses that had been taken from Durbungah

into the Maharrattah country, were purchased there for the supply of the Company's regiments. Formerly, the immense body of cavalry paid by the Nabob Vizier of Oude, used to be mounted by horses from North Bahar, but, since that worthless gang have been sent 'to the right about,' the demand created by that establishment has been almost wholly done away. Still, however, the prices have not, so far as I can learn, fallen: they probably are upheld by our encreased strength of cavalry regiments.

The price of a *serissah* is not to be easily defined; a very large portion of them sell for less than one hundred, while some reach as high as six hundred, rupees: at a medium, we may affix a hundred and fifty rupees at a fair standard, if the purchase be made at a fair, but, if second-hand, from a horse-dealer, from fifty to a hundred per cent. may be added. I have known very handsome sets, of four and six, purchased at Buxar, averaging fifteen hands and a half, that were purchased for about two hundred rupees each, and re-sold, *to friends*, for five and six hundred, a few weeks after!

The horses in highest estimation are chiefly imported from the Punjab, and from Persia, by regular dealers, who come down to our northwest frontier annually, after the rains, accompanied by many camels, generally of an excel-

lent breed, which, besides conveying the tents, &c., of the party, bear heavy burthens of shawls, dried fruits, and, occasionally, cats of the most beautiful description. Such gentlemen as wish for horses of great strength, ordinarily purchase *toorkies*; which, being extremely stout, and phlegmatic, answer well for persons of great weight, and of timid disposition.

The Persian horses have generally a finer shoulder, and attain a better standard, than the *toorky*, which rarely measures fifteen hands, and, in general, may be about fourteen: both kinds are remarkable for heavy, lob-ears, and are always well advanced in years before they are brought for sale. Even under that great drawback, they commonly sell for eight hundred, or a thousand, rupees, and, when of a handsome color, well formed, and of a good size, will produce from fifteen hundred, to three thousand, rupees.

The *jungle-tazee*, which is bred in the Punjab, or Seik country, is, in general, handsome, and spirited. These come at an earlier age, as does the *majennis*, which is bred in the same quarter, and is usually the offspring of a *jungle-tazee* horse, with a Persian or *toorky* mare; or *vice versâ*. Both these kinds may be rated as rising to full fifteen hands; and their prices are usually on a par with the *toorky*.

It is highly necessary, when purchasing of a

native dealer, to look very accurately into every matter relating to soundness, and quietness. Those gentry are admirable jockies, and commonly administer such doses of opium to their vicious cattle, as cause them for a while to appear pre-eminently passive; a circumstance easily detected, by insisting on the animal being left under charge of the purchaser's own *syce*, (*i. e.* groom,) for a day or two, before the money is paid.

When making bargains with European gentlemen, the whole of the transactions are generally overt, and free from disguise, but, when native is opposed to native, the affair is conducted with much assumed mystery. A cloth is laid over the knees of the seller and purchaser, as they squat *vis a vis* on the ground close together; the *hookah* is introduced, and resorted to, whenever any little difference takes place: at other times, the parties have each one hand, generally the right, under the cloth, when, by means of pressures on the palms, which denote hundreds, and of the fingers, which denote, in their due order, 20, 40, 60, and 80, speedily understand each other very fully. This affectation is carried to such an extent, that I have seen nearly a whole day passed in keeping up the farce, though afterwards it was divulged to me, as a great secret, that the bargain had been made during the first five minutes; but

the seller was desirous to uphold a character for being very tenacious of the sum originally demanded!

Almost every light-colored horse, such as a grey, or a dun, has its tail stained for many inches near the tip with *mindy*, (*i. e. hinna*,) as used by the ladies of Hindostan: generally, a ring of the same is added about two inches above, and of about two inches in depth. On account of the inconvenience and heat attendant upon the retention of full manes, which are considered indispensable towards the beauty of a horse, it is usual to braid them with silk, or thread ties, of various colors, chiefly red, or yellow: the practice certainly has the intended effect, but causes a large portion of the mane to fall off. The hair of the tail is never cut by a native, and but rarely by an European, on account of the millions of gad-flies, which, but for such a defence, would irritate the animal greatly, and occasion him to fall off, both from his condition, and his food.

The stables for horses should be amply spacious, and covered with thatch, in preference to tiles, whic[illegible] [illegible]row too great heat into the interior. The [illegible] head-ropes, which commonly branch out [illegible] the head-stall in different directions ought [illegible]ward, ought to be substantial and [illegible] [illegible]ng than limited. The heel-ropes ought [illegible] full twenty feet in length.

and kept a little off the ground, by a small bar, or prop, to prevent their being rotted by the wet. One end of each heel-rope is furnished with a loop of rather thinner and softer rope, plaited flat, so as not to injure the pastern, round which it loops on. But for such preventives, the *syces* dare not rub down their cattle; which would, besides, fight desperately, unless thus restrained.

Stalls of plank are by no means suited to the climate, nor would they offer any defence against the horses of India, very few of which are castrated. The best, but, at the same time, very insufficient, device, is the placing of swinging bars between the horses severally; even these are no restraint, further than limitting a horse in case he should get loose; a circumstance instantly announced by the tremendous uproar occasioned by such an accident, which but rarely occurs.

On account of the extreme danger to which horses are subjected by the frequency of fires, it is advisable that every stable, especially if thatched, should have a range of water-pots placed along the ridge. The[illegible]hould always be kept full of water, to be [illegible] disposal of men sent up to sprinkle the [illegible] and to extinguish whatever flakes ma[illegible]on its but, in case the thatch itself shou[illegible]ntally take fire, before any person can [illegible] distribute

the water, then the pots should be broken, by means of clods, poles, or whatever means may offer under such emergency.

The horse-dealers from the Punjab, and from Persia, may be said to lay the Company's provinces under annual contribution; since it is ascertained, that, one year with another, they take back bills, cash, or goods, (generally the former,) to the full amount of four lacs of rupees (£50,000). For this they deliver from five to six hundred horses, of which nine in ten are aged, some dried fruits, Persian cats, and shawls, the whole intrinsic value of which, or at least the prime cost and duties payable on the way, cannot exceed one-fourth of that sum. In truth, the duties, which are rigorously exacted by various petty princes, &c., through whose territories they must pass, form the greater portion even of that share of the booty. Yet do the venerable dealers in horse-flesh always plead poverty, and that they have made so very bad a trip, that, on their return home, their affairs must *go to ruin*: however, they make a shift to come down, year after year, though buying and selling to so much loss!

In selling horses, it is customary to describe their several *casts*, the same as those of the people of India: thus, an auctioneer advertises a *toorky*, or a *mujennis* 'of high *cast*,' to be sold on such a day. The term may, however, be considered

as rather technical, and at least as arbitrary in its meaning, as when our British knights of the hammer puff off some hovel, crammed into a corner, where no one would have dreamt of seeing an edifice, as 'a capital mansion, undeniably situated!' It must, at the same time, be acknowledged, that Asiatic advertisements do not require to be so cautiously accepted, *cum grano salis*, as those catch-penny notices, which not only attract the eye directly, but are literally supported by insidious puffs interspersed among the news of the day.

The extravagant price to which all articles of horse furniture have at times risen in India, operated as a considerable injury to the European manufacturer, who rarely makes much profit on goods intended for exportation. Within the last thirty years, numbers of persons, both European and native, have established themselves as sadlers and harness-makers. At first they were not much encouraged, owing to a belief very generally prevalent, that leather tanned in India was inferior to that exported from this country.

That objection did not stand its ground; for it was soon ascertained that the bark of the *baubool* (*mimoza*) was at least equal to that of the oak; and that the leather prepared therewith by several Europeans, who had constructed tan-pits, on a large scale, was both equal to, and

full fifty per cent. cheaper than, what the ships conveyed to India. Thenceforward, all the leather-work of the carriages built in India, some of which might vie with any to be seen in Europe, was done with country hides. Shoemakers, both European and native, resorted to the same means of supply, and offered both boots and shoes of the best prepared leather, the want of which had, for a long time, caused the very neat shoes made for about a shilling the pair, by the latter class, to be held in little estimation.

Saddlers and harness-makers have appeared, whose labors have proved eminently valuable; their materials, and their work, being alike excellent. I must here be understood to confine my approbation to the articles manufactured from leather tanned in a regular manner, and not that paltry brown-paper-like rubbish manufactured in pots and pans by indigent natives, who often work up a skin within the third or fourth day after its being stripped from some starved sheep, or goat; but which leather may always be distinguished by a narrow streak of white, that is, of raw hide, remaining in the middle of its thickness.

Saddles made of such crude materials, but in every other respect by no means to be condemned, may be had at Monghyr, where also bits and bridles are made with singular neatness,

for about ten rupees (25 shillings); but those of superior materials, and made under the inspection of an European, will cost full as much, or perhaps more, then the sums ordinarily paid in London for saddles, &c., of prime quality, and high finish.

The climate is extremely adverse to the tanner, inasmuch as there is great difficulty in obtaining an ample stock of raw hides; owing to the consumption of beef and mutton being confined to the European, and to the Mahomedan parts of the population; and to the great difficulty of conveying the skins to the pits before incipient fermentation may become obvious, and disqualify them for the purpose.

That leather might, with great advantage to both countries, be sent from India to Europe, cannot be doubted: the great difficulty would be to furnish such a quantity as might render the trade an object. According to the present high prices, it would almost be worth while to buy cattle in India, for the purpose of sending their hides and tallow to market in England. As to the benefits to arise to the state, they are too obvious to require pointing out.

A person who might have quitted India about thirty years ago, when the generality of articles of almost every description in use among Europeans, were sent from England; and when only one or two European tailors were to be seen

in all Bengal; when, also, a news-paper was scarcely in existence, would now, on landing in that country, be astonished at the improvements made in various branches of manufacture: he would contemplate the advance made in the mechanical arts as the certain fore-runner of independence; and he would view the columns of the several news-papers published at Calcutta, in all fourteen, (besides magazines, &c.,) whose columns teem with advertisements on a large scale: these he would view as the paramount results of great enterprize, founded upon extensive capitals, and backed by an almost unlimitted credit.

The news-papers are generally published once or twice weekly, at about a rupee each; most days of the week bring forth two papers, in which the price of advertising is generally eight annas, (*i. e.* half a rupee, or 15*d*.,) for each line: as the type is rather large, the expence of advertisements must, in some great houses, prove a conspicuous item among the disbursements.

In this particular, the Hindostanee, or rather the Persian, news-papers are miserably deficient; as, indeed, they are in whatever should be the contents of a publication devoted to the important purposes of mercantile, or of political, intelligence. Far from containing a single advertisement, or from communicating any matter relative to the arts, these bulletins, for I

can call them nothing better, are penned by persons about the several native courts, according to the whim of a sycophant, or to the mere tattle in the suburbs of a city; nay, they are often manufactured hundreds of miles from the places whence they are supposed to emanate, and contain accounts of battles and sieges, capitulations and defeats, halts and marches, known to the fabricators only; who, in whatever relates to invention, contradiction, and re-contradiction, absolutely surpass those industrious wights that supply our British news-mongers with paragraphs of the highest importance, accidents, murders, &c., &c., at the cheap rate of ten shillings per dozen!

There being no presses in use among the natives, every communication, whether private or public, must be manuscript; hence, the profession of scribe is, in some places, no bad livelihood; especially at Delhi, which, being the ancient seat of government, and the immediate residence of a nominal king, commonly called 'The Great Mogul,' supplies every quarter of India with *Akbars*, (*i. e.* news-papers,) written in the Persian language and character, on long narrow slips of a paper manufactured in India, either from bamboos, reeds, or cotton-wool. These slips are rolled up to about an inch in width, and, being enclosed in a small cover pasted together, are despatched, with the shew

of great importance, to the several quarters of Hindostan, under the pompous idea of their being every where in high estimation.

The only paper published by authority in Bengal, is the Calcutta Gazette, which is usually replete with advertisements for the sale of lands, printed in English, Persian, and Bengalese: as to news, or useful essays, &c., it is commonly sterile. Private advertisements in this paper are extravagantly dear, in consequence of the obligation imposed on all collectors, &c., to take it in; whereby one copy at least is received at every civil station, however small.

The advertisements for the sale of lands, above alluded to, have sprung from the adoption of what is called the *Mocurrery* system, which originated with Mr. Thomas Law, formerly collector of Bahar, and now settled in America. That plan certainly wore a very specious appearance; because it purported to be a perpetual adjustment of the rents, which were before subject to augmentation, and held out to the land-holders the comforting assurance of being considered on a footing with proprietors in fee-simple, so long as they should p rents as settled by the *Mocurrery* agre

While the plan was in agitation, the consideration of Marquis Cor whom it was adopted, the Board to which it was, *pro forma*, sul

several very sensible and cogent remarks, which, however, had not the effect of causing it to be abandoned. Time has fully justified the objections stated by that Board, at which the present Lord Teignmouth, then Mr. Shore, presided; and we find, after many years of experiment, that, without reaping the smallest advantage themselves, the Company appear bound to perpetuate a resignation of their rights as proprietors of the soil, and of their interests as a body rationally entitled to derive an augmentation of rent, in proportion as the produce of the soil may become more valuable, and more abundant.

This discussion has led me to the consideration of a most important topic; viz. the *Revenue of Bengal*, of which, and its manner of collection, I shall endeavor to give a summary; first presenting my readers with a copy of the *Mocurrery*, or permanent system.

BY THE GOVERNOR-GENERAL.

Proclamation.

To the Zemindars, Independent Talookdars, *and other actual* Proprietors of Land, *paying Revenue to Govern-*[illegible] *in the Provinces of* Bengal, Bahar, *and* Orissa.

ARTICLE I.

[illegible] nal regulations for the decennial settlement of [illegible] nues of *Bengal*, *Bahar*, and *Orissa*, passed [illegible] es respectively, on the 18th day of September [illegible] 5th day of November, 1789, and the 10th

day of February, 1790, it was notified to the *proprietors of land* with, or on behalf of, whom a settlement might be concluded, that the jumma assessed upon their lands under those regulations, would be continued after the expiration of the ten years, and remain unalterable for ever, provided such continuance should meet with the approbation of the Honorable Court of Directors for the affairs of the East India Company, and not otherwise.

ARTICLE II.

The Marquis Cornwallis, Knight of the Most Noble Order of the Garter, Governor-General in Council, now notifies to all Zemindars, Talookdars, and other actual proprietors of land, paying revenue to Government, in the provinces of *Bengal, Bahar*, and *Orissa*, that he has been empowered by the Honorable Court of Directors, for the affairs of the East India Company, to declare the jumma which has been, or may be, assessed upon their lands, under the regulations above mentioned, FIXED FOR EVER.

ARTICLE III.

The Governor-General in Council accordingly declares to the Zemindars, &c., with, or on behalf of, whom a settlement has been concluded under the regulations above mentioned, that, at the expiration of the term of the settlement, no alteration will be made in the assessment which they have respectively engaged to pay; but that they, and their heirs, and lawful successors, will be allowed to hold their estates at such an assessment, FOR EVER.

ARTICLE IV.

The lands of some Zemindars, &c., having been held *k'has*,* or let in farm, in consequence of their refusing to pay the assessment required of them, under the regulations

* In hand, or in trust.

above mentioned, the Governor-General in Council now notifies to the Zemindars, &c., whose lands are held *k'has*, that they shall be restored to the management of their lands, upon their agreeing to the payment of the assessment, which has been, or may be, required of them, in conformity to the regulations above mentioned, and that no alteration shall hereafter be made in that assessment, but that they, and their heirs, and lawful successors, shall be permitted to hold their respective estates at such an assessment FOR EVER; and he declares to the Zemindars, &c., whose lands have been let in farm, that they shall not regain possession of their lands before the expiration of the period for which they have been farmed, (unless the farmers shall voluntarily consent to make over to them the remaining term of their lease, and the Governor-General in Council shall approve of the transfer,) but, that, at the expiration of that period, upon their agreeing to the payment of the assessment which may be required of them, they shall be re-instated, and that no alteration shall afterwards be made in the assessment; but that they, and their heirs, and lawful successors, shall be allowed to hold their respective estates at such an assessment FOR EVER.

ARTICLE V.

In the event of the proprietary right in lands that are, or may, become the property of Government, being transferred to individuals, such individuals, and their heirs, and lawful successors, shall be permitted to hold the lands, at the assessment at which they may be transferred, FOR EVER.

ARTICLE VI.

It is well known to the Zemindars, &c., as well as to the inhabitants of *Bengal*, *Bahar*, and *Orissa*, in general, that, from the earliest times to the present period, the public assessment upon the lands has never been fixed; but, that, according to established rule and custom, the rulers of these provinces have, from time to time, demanded an encrease of

assessment from the proprietors of land; and, that, for the purpose of obtaining this encrease, not only frequent investigations have been made, to ascertain the actual produce of their estates, but that it has been the practice to deprive them of the management of their lands, and either to let them in farm, or to appoint officers on the part of Government, to collect the assessments immediately from the Ryots. The Honorable Court of Directors, considering these usages and measures to be detrimental to the prosperity of the country, have, with a view to promote the future ease and happiness of the people, authorized the foregoing declaration; and the Zemindars, independent Talookdars, and other actual proprietors of land, with, or on behalf of, whom a settlement has been made, or may be concluded, are to consider these orders, fixing the amount of the assessments, as IRREVOCABLE, and not liable to alteration by any persons whom the Court of Directors may hereafter appoint to the administration of their affairs in this country.

The Governor-General in Council trusts that the proprietors of lands, sensible of the benefits conferred upon them, by the public assessments being fixed FOR EVER, will exert themselves in the cultivation of their lands, under the certainty that they will enjoy exclusively the fruits of their own good management and industry, and that no demand will ever be made upon them, their heirs, or successors, by the present, or any future, Government, for an augmentation of the public assessment, in consequence of the improvement of their respective estates.

To discharge the revenues at the stipulated periods, without delay or evasion, and to conduct themselves with good faith and moderation towards their dependant Talookdars, and Ryots, are duties at all times indispensably required from the proprietors of land; and a strict observance of those duties is now, more than ever, incumbent upon them, in return for the benefits which they themselves will derive from the orders now issued.

The Governor-General in Council therefore expects that the proprietors of land will not only act in this manner themselves, towards their dependant Talookdars, but also enjoin the strictest adherence to the same principles, in the persons whom they may appoint to collect the rents for them. *He further* expects they will regularly discharge the revenue in all seasons, and he accordingly notifies to them, that, in future, no claims, or applications, for suspensions, or remissions, on account of drought, inundation, or other calamity of season, will be attended to; but, that, in the event of any Zemindar, &c., with, or on behalf of, whom a settlement has been made, or may be concluded, on his or her heirs, or successors, failing in the punctual discharge of the public revenue, which has been, or may be, assessed upon their lands, under the above-mentioned regulations, a sale of the whole of the lands of the defaulter, or such portion of them as may be sufficient to make good the means, will positively and invariably take place.

ARTICLE VII.

To prevent any misconstruction of the foregoing Articles, the Governor-General in Council thinks it necessary to make the following declarations to the Zemindars, &c.

First. It being the duty of the ruling power to protect all classes of people, and more particularly those who, from situation, are most helpless, the Governor-General in Council will, whenever he may deem it proper, enact such regulations as he may think necessary for the protection and welfare of the dependent Talookdars, Ryots, and other cultivators of the soil; and no Zemindar, &c. shall be entitled, on this account, to make any objection to the discharge of the fixed assessment which they have respectively agreed to pay.

Second. The Governor-General in Council having, on the 28th day of July, 1790, directed the Sayer Collections to be abolished, a full compensation was granted to the pro-

prietors of land, for the loss of revenue sustained by them in consequence of that abolition; and he now declares, that, if he should hereafter think it proper to re-establish the Sayer Collections, or any other internal duties, and to appoint officers on the part of Government to collect them, no proprietor of land will be admitted to any participation thereof, or be entitled to make any claim for remissions on that account.

Third. The Governor-General in Council will impose such assessments as he may deem equitable, on all lands at present alienated, and paying no public revenue, which have been, or may be, proved to be held under illegal, or invalid titles. The assessment so imposed will belong to Government, and no proprietor of land will be entitled to any part of it.

Fourth. The jumma of those Zemindars, &c., which is declared fixed, in the foregoing articles, is to be considered unconnected with, and exclusive of, any allowances which have been made to them in the adjustment of their jumma for keeping up tannahs, or police-establishments, and also of the produce of any lands which they may have been permitted to appropriate for the same purpose: and the Governor-General in Council reserves to himself the option of resuming the whole, or part, of such allowances, or produce of such lands, according as he may think proper, in consequence of his having exonerated the proprietors of land from the charge of keeping the peace, and appointed officers, on the part of Government, to superintend the police of the country.

The Governor-General in Council, however, declares that the allowances, or the produce of lands, which may be so resumed, will be appropriated to no other purpose but that of defraying the expence of the police, and that instructions will be sent to the collectors not to add such allowance, nor the produce of such lands, to the jumma of the proprietors of land, but, to collect the amount from them separately.

Fifth. Nothing contained in this Proclamation shall be construed to render the lands of the several descriptions of disqualified proprietors, specified in the first article of the regulations, regarding disqualified land-holders, passed on the 15th day of July, 1791, liable to sale for any arrears which may accrue on the fixed jumma that has been, or may be, assessed upon their lands under the above mentioned regulations for the decennial settlement, provided that such arrears have accrued, or may accrue, during the time that they have been, or may be, dispossessed of the management of their lands under the said regulations of July the 15th, 1791.

It is to be understood, however, that, whenever all, or any, of the descriptions of disqualified land-holders specified in the first article of the last mentioned regulations, shall be permitted to assume, or to retain, the management of their lands, in consequence of the ground of their disqualification no longer existing, or of the Governor-General in Council dispensing with, altering, or abolishing, those regulations, the lands of such proprietors will be held responsible for the payment of the fixed jumma that has been, or may be, assessed thereon, from the time that the management may devolve upon them, in the same manner as the lands of all actual proprietors of land who are declared qualified for the management of their estates; and also of all actual proprietors who are unqualified for such management, by natural, or other, disabilities, but do not come within the description of unqualified land-holders specified in the first article of the regulations of July the 15th, 1791, are, and will be, held answerable for any arrears that are, or may become, due from them on the fixed jumma, which they, or any persons on their behalf, have engaged, or may engage, to pay under the above mentioned regulations, for the decennial settlement.

ARTICLE VIII.

That no doubt may be entertained whether proprietors of land are entitled, under the existing regulations, to dispose of their estates, without the previous sanction of Government, the Governor-General in Council notifies to the Zemindars, &c., that they are privileged to transfer to whomsoever they may think proper, by sale, gift, or otherwise, their proprietary rights in the whole, or any portion, of their respective estates, without applying to Government for its sanction to the transfer; and, that all such transfers will be held valid, provided they be conformable to the Mahomedan, or to the Hindu, Laws, [according as the religious persuasions of the parties to each transaction may render the validity of it determinable by the former, or the latter, code,] and that they be not repugnant to any regulations now in force, which may have been passed by the British administration, or to any regulations that they may enact hereafter.*

ARTICLE IX.

From the limitation of the public demand upon the lands, the net income, and, consequently, the value (independent of encrease obtainable by improvements) of any landed property, for the assessments on which a distinct engagement has been, or may be, entered into between Government and the proprietor, or that may be separately assessed, although included in one engagement with other estates belonging to the same proprietor, and which may be offered for public or private sale entire, will always be ascertainable by a comparison of the amount of the fixed jumma assessed upon it, (which, agreeably to the foregoing

* Here appears a wide field for innovation!

declarations, is to remain unalterable FOR EVER, to whomsoever the property may be transferred,) with the whole of its produce, allowing for the charges of management.

But it is also essential, that a notification should be made of the principles upon which the fixed assessment charged upon any such estate will be apportioned on the several divisions of it, in the event of the whole of it being transferred, by public or private sale, or otherwise, in two or more lots, or of a portion of it being transferred, in one, or two, or more lots, or of its being joint property, and a division of it being made amongst the proprietors; otherwise, from the want of a declared rule for estimating the proportion of the fixed jumma, with which the several shares would be chargeable in such cases, the real value of each share would be uncertain, and, consequently, the benefits expected to result, from fixing the public assessment upon the lands, would be but partially obtained.

The Governor-General in Council has, accordingly, prescribed the following rules for apportioning the fixed assessment in the several cases above mentioned; but, as Government might sustain a considerable loss of revenue by disproportionate lots of the assessment, were the apportioning of it, in any of the cases above specified, left to the proprietors, he requires, that all such transfers, or divisions, as may be made by the private act of the parties themselves, be notified to the collector of the revenue of that zillah in which the lands may be situated, or to such other officer as Government may, in future, prescribe, in order that the fixed jumma assessed upon the whole estate may be apportioned on the several shares, in the manner hereafter directed; and that the names of the proprietors of each share, and the jumma charged thereon, may be entered upon the public registers; and that separate engagements, for the payment of the jumma assessed upon each share, may be executed by the proprietors, who will thenceforward be considered as actual proprietors of land.

And the Governor-General in Council declares, that, if the parties to such transfers or divisions shall omit to notify them to the collector of the revenue of the zillah, or such other officer as may be hereafter prescribed, for the purposes before mentioned, the whole of such estate will be held responsible to Government for the discharge of the fixed jumma assessed upon it, in the same manner as if no such transfer or division had taken place.

The Governor-General in Council thinks it necessary further to notify, in elucidation of the declarations contained in this article, (which are conformable to the principles of the existing regulations,) that if any Zemindar, &c., shall dispose of a portion of his, or her, lands, as a dependent Talook, the jumma which may be stipulated to be paid by the dependent Talook, will not be entered upon the records of Government, nor will the transfer exempt such lands from being answerable, in common with the remainder of the estate, for the payment of the public revenue assessed upon the whole of it, in the event of the proprietor, or his, or her, successors, falling in arrear from any cause whatever; nor will it be allowed, in any case, to affect the rights, or claims, of Government, any more than if it had never taken place.

First. In the event of the whole of the lands of a Zemindar, &c., with, or on behalf of, whom a settlement has been, or may be, concluded under the regulations above mentioned, being exposed to public sale, by the order of the Governor-General in Council, for the discharge of arrears of assessment, or in consequence of the decision of a court of justice, in two or more lots, the assessment upon each lot shall be fixed at an amount which shall bear the same proportion to its actual produce, as the fixed assessment upon the whole of the lands sold may bear to their actual produce. This produce shall be ascertained in the mode that is, or may be, prescribed by the existing regulations, or such other regulations as the Governor-General in Council

may, hereafter, adopt; and the purchaser, or purchasers, of such lands, and his, or their, heirs, and lawful successors, shall hold them at the jumma at which they may be so purchased, FOR EVER.

Second. When a portion of the lands of a Zemindar, &c., with, or on behalf of, whom a settlement has been, or may be, concluded under the above regulations, shall be exposed to public sale, by order of the Governor-General in Council, for the liquidation of arrears of assessment, or pursuant to the desicion of a court of justice, the assessment upon such lands, if disposed of in one lot, shall be fixed at an amount which shall bear the same proportion to their actual produce, as the fixed assessment upon the whole of the lands of such proprietors, including those disposed of, may bear to the whole of their actual produce.

If the lands sold shall be disposed of in two, or more, lots, the assessment upon each lot shall be fixed at an amount which shall bear the same proportion to its actual produce, as the fixed assessment upon the whole of the lands of such proprietor, including those sold, may bear to the amount of their actual produce. The actual produce of the whole of the lands of such proprietor, whether the portion of them which may be sold be disposed of in one, or in two, or in more, lots, shall be ascertained in the mode that is, or may be, prescribed by the existing regulations, or such other regulations as the Governor-General in Council may hereafter enact, and the purchaser, or purchasers, of such lands, and his, or her, or their, heirs, and successors, will be allowed to hold them at the jumma at which they may be so purchased, FOR EVER; and the remainder of the public jumma, which will consequently be payable by the former proprietor of the whole estate, on account of the portion of it that may be left in his, or her, possession, will continue unalterable FOR EVER.

Third. When a Zemindar, &c., with, or on behalf of, whom a settlement has, or may be, made, shall transfer the

whole of his, or her, estate, in two, or more, distinct portions, to two, or more, persons, or a portion thereof to one person, or to two, or more, persons in joint property, by private sale, gift, or otherwise, the assessment upon each distinct portion of such estate, so transferred, shall be fixed at an amount which shall bear the same proportion to its actual produce, as the assessment on the whole estate of the transferring proprietor, of which the whole, or a portion, may be so transferred, may bear to the whole of its actual produce. This produce shall be ascertained in the mode that is, or may be, prescribed by the existing regulations, or such other regulations as Government may hereafter adopt; and the person, or persons, to whom such lands may be transferred, and his, or her, or their, heirs, and lawful successors, shall hold them at the jumma at which they were so transferred, FOR EVER; and (where only a portion of such estate shall be transferred) the remainder of the public jumma, which will consequently be payable by the former proprietor of the whole estate, on account of the lands that may remain in his, or her, possession, shall be continued unalterable FOR EVER.

Fourth. Whenever a division shall be made of lands, the settlement of which has been, or may be, concluded with, or on behalf of, the proprietor, or proprietors, and that are, or may become, the joint property of two, or more, persons, the assessment upon each share shall be fixed at an amount which shall bear the same proportion to its actual produce, as the fixed jumma, assessed upon the whole of the estate divided, may bear to the whole of its actual produce. This produce shall be ascertained in the mode that is, or may be, prescribed by the existing regulations, or such other regulations as the Governor-General in Council may hereafter adopt; and the sharers, and their heirs, and lawful successors, shall hold their respective shares, at the jumma at which they may be assessed, FOR EVER.

ARTICLE X.

The following rules are prescribed respecting the adjustment of the assessment on the lands of Zemindars, &c., whose farms are, or may be, held *k'has*, or let in farm, in the event of their being disposed of by public sale, or transferred by any private act of the proprietor, or of their being joint property, and a division of them taking place among the proprietors.

First. If the whole, or a portion, of the lands of a Zemindar, &c., who may not have agreed to the assessment proposed to him, or her, under the regulations above mentioned, and whose lands are, or may be, held *K'has*, or let in farm, shall be exposed to public sale, in one, or two, or more, lots, pursuant to the decree of a court of justice, such lands, if *k'has*, shall be disposed of at whatever assessment the Governor-General in Council may deem equitable, and the purchaser, or purchasers, of such lands, and his, or her, or their, lawful successors, or heirs, shall hold the land at the assessment at which they may be so purchased, FOR EVER.

If the lands, at the time of their being exposed for sale, shall be held in farm, and shall be put up in one, or two, or more, lots, they shall be disposed of under the following conditions. The purchaser, or purchasers, shall receive during the unexpired part of the term of the lease of the farmer, whatever such proprietor shall have been entitled to receive in virtue of his, or her, proprietary rights, on account of the lands so purchased, and such purchaser, or purchasers, shall engage to pay, at the expiration of the lease of the farmers, such assessment on account of the lands as Government may deem equitable. The sum to be received by the purchaser, or purchasers, during the unexpired part of the term of the lease of the farmer, and the jumma to be paid by such purchaser, or purchasers, after the expiration of the lease, shall be specified at the time of sale, and such purchaser, or purchasers, and his, or her, or their, heirs, and lawful successors, shall be allowed to hold

the lands, at the assessment at which they may be so purchased, FOR EVER.

Second. If a Zemindar, &c., whose lands are, or may be, held *k'has*, or let in farm, shall transfer by private sale, gift, or otherwise, the whole, or a portion, of his, or her, lands, in one, or two, or more, lots, the person, or persons, to whom the lands may be so transferred, shall be entitled to receive from Government, (if the lands are held *k'has*,) or from the farmer, (if the lands are let in farm,) the mali-connah to which the former proprietor was entitled, on account of the lands so transferred. The purchaser, or purchasers, of such lands will stand in the same predicament as the Zemindars, &c., mentioned in the fourth article, whose lands are held *k'has*, or have been let in farm, in consequence of their refusing to pay the assessment required of them under the before mentioned regulations for the decennial settlement, and the declarations contained in that article are to be held applicable to them.

Third. In the event of a division being made in lands that are, or may become, the joint property of two, or more, persons, and which are, or may be, held *k'has*, or be let in farm, the proprietors of the several shares will stand in the same predicament, with regard to their respective shares, as the Zemindars, &c., specified in the fourth article, whose lands have been let in farm, or are held *k'has*, in consequence of their having refused to pay the assessment required of them under the before mentioned regulations of the decennial settlement, and the declarations contained in that article are to be considered applicable to them.

ARTICLE XI.

The Governor-General in Council avails himself of this opportunity to notify to the Zemindars, &c., as well as to all other description of persons, that it is his intention forthwith to establish Courts of Justice throughout the country, upon such principles as will put it out of the power of indi-

viduals to injure each other with impunity, and prevent the officers of Government from infringing the rights and property of any of the inhabitants of these provinces, by ensuring a speedy and impartial administration of justice in all cases whatever.

Dated at Fort-William, the 22nd day of March, 1793, corresponding with the 12th day of Cheyte, 1199, of the Bengal Æra, and the 9th day of Shabaun, 1207, Higeree.

In order to comprehend the foregoing more fully, it is proper to state, that when the *mocurrery* (or perpetual) system of revenue was originally proposed, the Governor-General in Council (Marquis Cornwallis) notified, that it would be tried, in the first instance, for ten years only; whence the term '*decennial settlement.*' But, whether from an early conviction of its excellence, or that the Marquis felt anxious to ensure to the natives, and, as he apprehended, to the Company also, those immense benefits attendant upon a final adjustment of so momentous, and so extensive a concern, we see that, previous to his return to Europe, he rendered the settlement as permanent as human ability could effect. If report be true, the satisfaction he experienced, on concluding the settlement, was afterwards greatly diminished, when, on his re-appointment to India, he found that a thousand deceptions had been practised by the natives, notwithstanding every endeavor to frustrate such litigious or deceptive intentions;

that the Company's finances had been fettered very imprudently by that restriction which precluded Government from availing itself of growing resources; and that the 'Zemindars, independent Talookdars, and other actual proprietors of land,' so far from considering themselves to be under any obligation to the Company, raised their heads with no little insolence, and, in many instances, even complained that enough had not been conceded to them.

The most mortifying fact was, that full one-third of the landed property within the Company's provinces had actually been under the hammer. This was an evil which spoke for itself, and which no gloss, no colors, could conceal. That, under such a government, property, to the amount of millions upon millions, should become thus exposed to transfer, was a reflection that could not fail to rankle in the mind of him, who had expected to see content, prosperity, and loyalty, teeming in every quarter! Never was the vanity of man more conspicuously displayed, or the mortification of disappointed zeal more grievously felt.

The abrogation of that incertitude, which not only subjected the land-holder to imposition, but the revenue to much defalcation, was assuredly a most serious consideration; but, in adopting those measures which might seem to have the most desirable tendency, it was neces-

sary to have a full idea of the views and dispositions of the persons on whom the most essential benefits were to be conferred. A deficiency of experience, or of insight into their true character, could alone have led the Marquis into an error, from which the mode of extrication is, I believe, among the most pressing desiderata of the British government.

Much pains have been taken to prove, that the *zemindars*, &c., were the legitimate proprietors of the soil; but a very slight inspection of the forms of ancient grants, made by the Emperors of Hindostan, must satisfy the most scrupulous, that no person whatever occupied the soil, except by tolerance of that power under which it was protected. Until our acquisition of the *Dewany*, (*i. e.* of the government of the provinces of Bengal, Bahar, and Orissa,) no fixed tenure, beyond the will of the ruling despot, was known, or even claimed; to have asserted such a right, would have been to provoke immediate castigation, and removal from the lands.

Even in the times of our own governors, no hesitation was made respecting the banishment (for it virtually was one) of those who either assumed a decided claim to the property, or who, from whatever cause, whether rebellion, mis-management, or unwillingness to pay their rents, fell in arrears. Such men were always displaced, and others were appointed in their

stead, as a mere matter of course. '*Saheb ke koossy,*' (its master's pleasure,) was the patient response of the offender; who, whatever might be his feelings, or his opinions, felt the expediency of being perfectly passive on such an occasion.

I believe the records will prove, that Mr. Hastings, during the ten years he was in the chair, made a very free use of this well-understood authority; yet, so far were the natives from thinking him unjust, or over severe, that, when the intelligence of his being acquitted by parliament, was received in India, such was the pleasure felt by all classes, that addresses of congratulation were poured in from every part of the country! This was a compliment that never had been paid by the natives to any of our governors, even when about to return to Europe; a period, at which it might be expected some adulatory addresses might, by great influence, be obtained: no, it was the spontaneous flow of gratitude, pity, and admiration; such as never would have been forth-coming, if the ejectment of a *zemindar* from his soil had been considered as the expulsion from an hereditary or established right, rather than as the removal of tenants-at-will.

It certainly must appear curious, that we receive eleven-sixteenths of the produce of the soil *from its proprietors!* Such is, indeed, the case, taking all upon an average. The pea-

santry, in a number of instances, pay more; especially where middle-men (a class of people by no means scarce in India) are concerned. These are the same harpies all over the world; never failing to reduce the industrious to distress, and to seize upon the all of those most unfortunate beings, whom want of experience, or of interest, may place at their mercy!

The old system of farming out the country to particular persons, many of whom rented of the Company to the amount of fifty lacs, (upwards of £600,000.,) was productive of the greatest evils with which an industrious, but indigent, population could have to contend! Under that mode, it was impossible for Government to make certain of its rents, which were generally remitted in part to the great farmers, lest they should, in bad seasons, oppress the Ryots, and drive them either to despair, or out of the country. This was intended as an act of generosity on the part of Government, which had not the means of enforcing arrears, otherwise than by the sale of a farmer-general's property, whence but a small portion could be expected to result; but, unhappily, no alleviation of consequence was extended to the real agriculturist; who, being subject to a very summary process, was often compelled to embrace ruin, rather than to suffer all the penalties inflicted by an avaricious and obdurate creditor.

That such should have been the case under the immediate eye of Government, may excite much surprize; but it must be considered, that, under the farming system, the least interference would have instantly been the signal for universal clamor, and that it would have proved beyond the power of all the civil servants, throughout the Company's territories, to have even registered, much less to have heard, and settled, all the references which would have been made.

This difficulty could not fail to be greatly augmented, by the extreme deficiency then existing of Company's servants in every part of India: for, in each of the *zillahs*, or districts, only a collector, with an assistant, perhaps, was stationed. In one instance, I recollect passing by a civil station, when marching from one province to another, when the resident-surgeon was under the necessity of requesting an officer of our corps to aid him in examining the accounts of the factory, which he had been obliged to make out; the president and his assistant being both absent on public business. This occurrence afforded not only much amusement, but a wide scope for observation regarding the paucity of Europeans employed at the out-stations.

In those days, the collector had abundance of duty to perform; for he was not simply to settle all accounts respecting the revenue, and, in some instances, of manufactures provided for the Com-

pany's homeward cargoes, but the whole of the criminal, as well as of the civil, code of justice, were under his control: whatever petty offences were committed, or whatever disputes arose among the inhabitants, became equally his province to enquire into. Fortunately, the *banian*, or *dewan*, employed, used to take a very considerable portion of such toil off master's hands, and to prevent, by a kind of petty *adaulut*, or tribunal, held in some corner of the office, or perhaps at his own house, thousands of references to his principal. The chief renter of the *zillah* being often employed as *banian* to the collector, it is easy to imagine to which side justice, as it was called, used to incline.

Within the last twenty years, the number of servants employed by the Company has been greatly augmented; not only on account of their extension of territory, but, in consequence of the separation, very judiciously made, of two offices, incompatible to be held by the same individual. The collector is now, except in a very few *zillahs* of less note, confined to the collection of the revenues, having under him one or more assistants, according to the extent of his district.

The whole of the judicial proceedings are under cognizance of a judge, who, aided by his register, decides civil causes between parties residing within his jurisdiction; while the criminal catalogue is handed over to a court

composed of natives versed in the Mahomedan and Hindu laws, though the former are, generally, the guide. These native judges are superintended in their proceedings by three of the Company's servants of long standing, having likewise under them a secretary, or register.

Such tribunals are established in various parts of the country, particularly at Calcutta, Moorshadabad, Dacca, Patna, Benares, and in the Ceded Provinces, under the designation of Provincial Courts of Appeal and Circuit. There are, besides, judges, each having a register and an assistant, stationed at Benares, Moorshadabad, Patna, and Dacca, for the especial purpose of administering justice, and for the correction of abuses within those cities respectively.

The stations of the *zillah* courts, and of the collectors, are as follow :—

Agra,	Dacca,	Nuddeah,
Allahabad,	Dinapore,	Purneah,
Ally-Ghur,	Etayah,	Rajeshaye,
Backergunge,	Furruckabad,	Ramghur,
Bareilly,	Gorackpore,	Rungpore,
Bahar,	Hoogly,	Saharunpore,
Benares,	Jessore,	Sarun,
Beerboom,	Juanpore,	Shahabad,
Boglepore,	Meerut,	Sylhet,
Burdwan,	Mirzapore,	Tipperah,
Cawnpore,	Momensing,	Tirhoot,
Chittagong,	Moorshadabad,	Twenty-four Per-
Cuttack,	Moradabad,	gunnahs.

The stations of the commercial residents, whose duty is entirely confined to the providing of investments for the Company's shipping, are,

Bareilly,	Goruckpore,	Mauldah,
Bauleah,	Hurial,	Midnapore,
Commercolly,	Hurripaul,	Patna,
Cossimbazar,	Jungipore,	Radnagore,
Dacca,	Keerpoy,	Rungpore,
Etayah,	Luckypore and Chittagong,	Santipore,
Golagore,		Soonamooky.

Collectors of goverament customs, most of whom are also collectors of town duties, are stationed at

Benares,	Dacca,	Moorshadabad, and
Calcutta,	Furruckabad,	Patna.
Cawnpore,	Hoogly,	

The diplomatic residents are as follow:—at

Delhi.	The Court of the Emperor.
Hydrabad.	The Court of the Nizam.
Lucknow.	The Court of the Nabob Vizier of Oude.
Mysore.	The Court of the Rajah, (late Tippoo's country.)
Nagpore.	The Court of the Berar Maharrattahs.
Poonah.	The Court of the Peishwa, and with Dowlut Row Scindeah, one of the Chiefs of the Maharrattah League.

The difference that has been made by the conduct of the British government, in the suppression of an immense number of farmers on

the large scale, and of middle-men that again stood between those farmers and the peasants, has been immense. In many places, the lands are now in the possession of an industrious population, holding them from the renters, or, if I may use the term, from the proprietors of villages and small *talooks*, consisting of, perhaps, three or four thousand *bigahs:* the revenues are thus rendered far more easy of collection, and, consequently, more certain; because it is now the interest of every honest renter to be forth-coming with his rents at the office of the collector, at the several periods when they should be paid.

Those periods are not equi-distant, as in England; but are generally settled in such manner as may be convenient to the tenants, according as their several crops may be reasonably expected to become marketable. The division is by a certain number of annas, or sixteenths, in each rupee, being payable at particular seasons; allowance being made for the different species of grain, &c., cultivated. There being no harvest of grain from the beginning of November to the beginning of March, the collections generally fall light in the intermediate months, but, about April and May, a large portion usually becomes payable, and again, in Bengal, after the rice is harvested: but, on the whole, the rent may be commonly taken at four instalments, two of

which are considerable, and two of smaller portions of the rupee.

The heavy *kists*, or collections, of Bengal, are from August to January, in the proportion of two-thirds of the whole rent; the great crops in that quarter being cut after the rains. The gruff *kists*, which include the *rubbee*, or small harvest of white-corn, sugar, &c., come in between January and the beginning of May. The fruits, fish, &c., from April to July. In Bengal, the year begins in April; in Bahar, it begins in September. All the collections are made in money. Mr. Grant, formerly collector of Bhauglepore, has published a small tract on the subject of the revenues, which I strongly recommend to my readers: the work is, I believe, rarely to be obtained; therefore, a new edition seems to be loudly demanded.

It is to be feared, that, however beneficial the existing system may be, and, however equitable the arrangements made under the *Mocurrery* settlement have proved themselves, still the Company are not likely to be benefitted in proportion to the assiduity they have displayed, or to the tenderness with which the rights of their subjects have been regarded.

This, however, is to be said; that, according as the enterprize of individuals may, by degrees, give additional value to the soil, by an immense encrease of exportation, from various

parts of the country, of a million of commodities, which, until latterly, were either unknown, or unheeded, so will the duties collected at the several *chokies*, (custom-house stations,) and at the several ports, together with the demand for British manufactures, be proportionally augmented.

It should be very generally made known, that the Company receive into their treasury all the realized property of persons demising in India, under letters of administration, or under the acts of executors, duly acknowledged and certified by the supreme courts of justice at the several presidencies. This effectually secures the interest persons in Europe may have in the estates of friends, &c., dying in India: so rigidly is this observed, that the relatives of any private soldier may fully ascertain how his property, if any, has been disposed of, and receive whatever sums may be forth-coming from the sale of his effects, &c.

Such a measure fully guards the principal of any sum left in the Company's treasury; while, at the same time, the most pleasing facility is given to individuals, to enable them, or their attornies, to receive the interest, either at the presidency, or in the *moofussul*, (that is, from the collectors,) according as may be convenient: but such can only be done under a specific power of attorney.

The generality of traders, who resort to distant inland markets, near which to reside, or who, in favorable situations, become conspicuous as manufacturers, whether of indigo, cloth, sugar, &c., have invariably some connection with one or more agency-houses at the presidency; on these they draw their bills, generally for hypothecated cargoes, sent from the manufactory, either to be sold by them, or to be shipped for Europe. This, under a pure agency, is unexceptionable, provided the firm rests on the broad basis of absolute property, and does not play with the cash belonging to its less speculative constituents: such may be said to be merely the bankers of those whose consignments they receive, and pass on to this country without participating in the adventure; and confining themselves to a stipulated per centage on the amounts of invoices, according to the scale in common use.

Agency-houses are not confined to British subjects; the Portugueze, the Armenians, the Greeks, and others, form a portion of several firms of great respectability; or, at least, of those companies which, under different designations, insure the greater part of those vessels, which either sail from India to Europe direct, or that traverse the Indian seas, according to the state of the monsoons; carrying on a lucrative trade among the several Asiatic ports.

It must not be supposed, that persons devoting their whole attention to the concern of others, in such a climate, where the expences are very great, and from which it is an object with most adventurers, and speculators, to retire with such a competency as should afford some enjoyments during the decline of life, are to be remunerated in the same manner as though they had merely to attend their counting-houses in London for a very few hours daily. The Indian agent must keep a large establishment of *sircars*, *podars*, &c., and must maintain extensive connections in various parts of the country: nay, he is often expected to have an apartment, or two, in his dwelling, devoted to the accommodation of such of his country correspondents as may occasionally visit the presidency.

Combining all these circumstances, it will be evident, that his charges for commission must be such as, among us, would appear extravagantly high. The same causes operate towards raising the expences of a suit in the supreme court of judicature equally above those of the British courts; though the latter are certainly full high enough!

The terms of receiving, or paying, money, in exchange with Europe, China, or other parts, are completely arbitrary; being governed solely by the value of money to any particular firm at

the time of negociating: I have known instances of some firms declining to offer more than two shillings and sixpence for a sicca rupee, bills being given payable at six months after sight in Europe, while others, whose stability appeared equally solid, offered two shillings and nine-pence for the same accommodation.

In point of commerce, Calcutta may, perhaps, be properly classed with Bristol; making this allowance, that what the former wants in the number of vessels employed, is made up by their average tonnage being considerable, and the value of their cargoes far superior. The length of the voyage must likewise be taken into consideration: a vessel may, during times of profound peace, make three voyages within twelve months, from Bristol to America, or the West Indies, and back again, and the same either to the Baltic, or to the Levant; whereas, few Indiamen make more than one return to their moorings in the Thames under fifteen months; the majority are out from fifteen to twenty months.

Hence, all our British ports appear more crowded, taking the year round, than Calcutta, which, from July to November, or even to January, often presents a forest of masts; while, on the other hand, during the rest of the year, only such vessels as may be under repair, or

that have lost their season, or that beat up the bay against the *monsoon*, are to be seen in the river.

I have already explained, that, during half the year, that is, from about the middle of March to the middle of September, the wind is southerly, but then gradually changes to the northward, from which quarter it blows regularly for about five months, when it again gradually veers about to the southward. This gives name to the 'northerly and southerly *monsoons*;' which all navigators study to take advantage of: the difference in going with, or against the *monsoon*, from Calcutta to Madras, or *vice versâ*, often makes the difference of full five or six weeks, sometimes more: the trip being very commonly made in a week with the *monsoon*; but, against it, sometimes occupying no less than three months!

Few ships make more than one trip between Malabar and China, within the year, on account of the *monsoon*; but, between the intermediate ports from Bombay to Calcutta, two trips may be considered the average. During the wars with Hyder, and his son Tippoo, vessels have made four trips within the year, from Bengal to Madras; but such must not be considered a fair standard, three being considered a great exertion.

The town of Calcutta, which is estimated at

a population of a hundred thousand souls, whereof not more than one thousand are British, is situated very advantageously for commerce. The Hoogly, which is navigable for ships of a thousand tons, at least thirty-five miles above Calcutta, communicates with the Ganges, by means of the Cossimbazar river, and has communications with the whole of the Sunderbund Passages, either through Tolley's Canal, the creek called Chingrah Nullah, or the southern passage, through Channel Creek, which is adopted by the greater part of the vessels conveying rice and salt from the Soonderbunds: these are of a very stout construction, suited to those wide expanses of water they have to cross in that very hazardous line of navigation.

The average depth of water, within a stone's throw of the eastern bank, on which Calcutta ranges for several miles, (including the suburbs up to the Maharrattah Ditch,) may be from six to eight fathoms when the tide is out. At particular places, the water deepens very suddenly, but, in most parts, a shelf, abounding with mud, runs out for sixty or seventy yards, down to low water mark, where the bank falls off, so that ships of any burthen may moor within a very few yards. The great front thus given to the town, affords innumerable facilities to those concerned in the shipping; especially as the custom-house, which is on the quay belonging to the old fort,

stands nearly central, in respect to the European population.

The *donies*, which are small craft intended for the coasting trade carried on principally by native merchants, commonly lie higher up, opposite the Chitpore *m'hut*, or temple; there, in tiers, much the same as the shipping in the Thames, these *pariah* vessels present a contrast with the superb edifices under British management, and at once characterize not only the ignorance, but the narrow minds of their owners.

Few *donies* measure more than a hundred and fifty tons, or have more than two masts; sloops are by far most common, and the generality are equipped with *coir* cordage, as well as with country-made canvas.

The greater portion of these vessels return either in ballast, after delivering their cargoes of rice, at various ports in the Northern Sircars, or perhaps in the Carnatic; or they import with light cargoes, composed chiefly of *coir* and *cowries*, from the Sechelles and Maldivies; to which they likewise, now and then, make a bold voyage, at favorable seasons, with small invoices of coarse cottons, fit for the use of those islanders.

Here, and there, we see a *doney* with some European on board to navigate her; but, in in general, only natives are employed; and the

Europe-ships, which arrive with crews from their respective country, are often compelled to take a portion of lascars on board, for the purpose of aiding those who survive the pestilential miasma, to which they are so inconsiderately, or, more properly, inhumanly, subjected, while lying at Diamond-Harbour, &c. Those who escape with their lives, are usually much weakened by severe attacks of the ague, of which they rarely get quit, until relieved by an alterative course of mercury, in conjunction with the change of air experienced by getting out to sea.

I shall, for the present, take leave of my readers; observing, that I am now preparing for the press a work intended to give a full, but compact, 'DESCRIPTION OF INDIA IN GENERAL.' In that work, it will be my study so to combine and arrange the several important matters coming under consideration, as to render the whole of whatever may relate to that interesting quarter, fully intelligible, and equally familiar.

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